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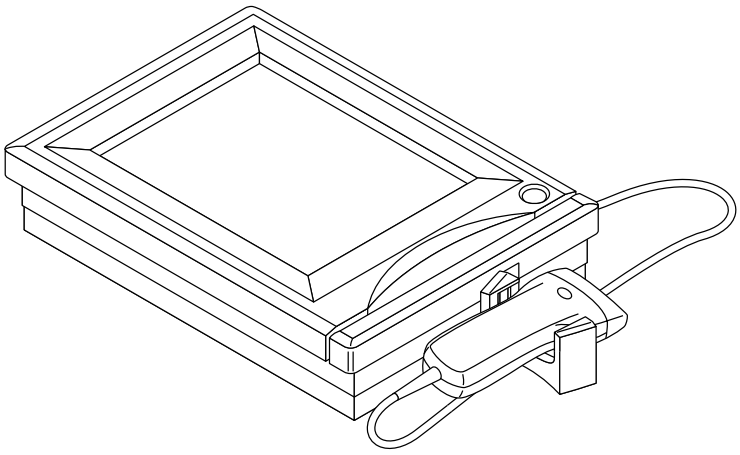
FUJI COMPUTED RADIOGRAPHY

FCR ID Terminal/Console
ID-T741

Service Manual



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Precautions in Using the Service Manual

This manual should not be used by anyone other than the servicing staff members qualified through the training specified by our company. Since this manual contains confidential information including engineering know-how related to product development, it is prohibited to distribute the manual to users or to allow them free access to the manual without obtaining prior permission from Fuji Photo Film Co., Ltd.

This manual is intended to assist the service person in the safe and efficient servicing of the equipment described.
The equipment must be used in accordance with the procedures contained in this manual and must not be used for purposes other than those which are describe herein.

The equipment should only be used by persons having recognized qualifications and, if relevant, having adequate training on this equipment, especially regarding protective measure such as laser radiation protection.

It is the responsibility of the user to ensure that existing legal regulations regarding installation of the building with respect to the equipment are observed. Moreover the legal regulations regarding the operation of the equipment are to be observed.

Incorrect operation, or failure of the user to maintain the equipment in accordance with the schedule of maintenance, relieves the manufacturer or his agent from all responsibility for consequent non-compliance, damage, injury, defects and/or other malfunction.

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About This Manual

■ Product denomination

In this manual, the product code name, IDT-IV is used for simplification purposes, instead of the official product name, ID-T741.

Also, IDC-IV is used instead of ID-T742 for the same purposes.

■ Menu or button selection on the display

To select a menu or a button (icon) displayed on the screen while in the service mode, lightly touch it with the tip of a finger. You need not press hard.

Because this screen detects a selected position using infrared rays, pressing the menu or the button with a finger or hand flat down or touching the whole palm of the hand on the screen may result in selecting a different button or even disabling any selection.

Safety

Observe the following safety precautions to avoid possible hazards and accidents during maintenance servicing.

■ Power supply

To avoid electric shock hazards and machine malfunction, be sure to turn OFF the power before proceeding with parts replacement. Use due care even after shutting off the power because some parts are not fully discharged immediately after power OFF.

For voltage measurement and other jobs that cannot be performed under the unenergized condition, follow the procedures set forth in this manual and exercise due care to avoid electric shock and other hazards.

■ Safety devices

Pay attention to safety devices, such as fuses, breakers, interlock switches, panels, and covers so that their accident prevention functions are always operative. Never make any alteration or modification that may impair their functionality.

■ Backup battery

When installing the backup battery, ensure that it is properly oriented. If the battery is incorrectly oriented when positioned, it may burst. When it needs replacement, use the same type as that has been used or the battery prescribed in the parts list. When putting the battery out of use, dispose of it at site in compliance with manufacturer instructions.

■ Preparations

Determine the installation site, considering the work flow and necessary additional facilities. Perform construction, electrical facility, and air-conditioning facility work in advance.

Avoid the following installation sites:

- Places where the temperature changes drastically;
- Places near heat sources such as heaters;
- Places where water leakage or equipment submersion may occur;
- Places where the machine may be exposed to any corrosive gas;
- Dusty places;
- Places where the machine is subject to constant or excessive vibration or shock;
- Places exposed to direct sunlight;

◆◆ *CAUTION* ◆◆

When using the interface cables for serial connections, it is necessary to specify their connection directions because of the remote power control specification.

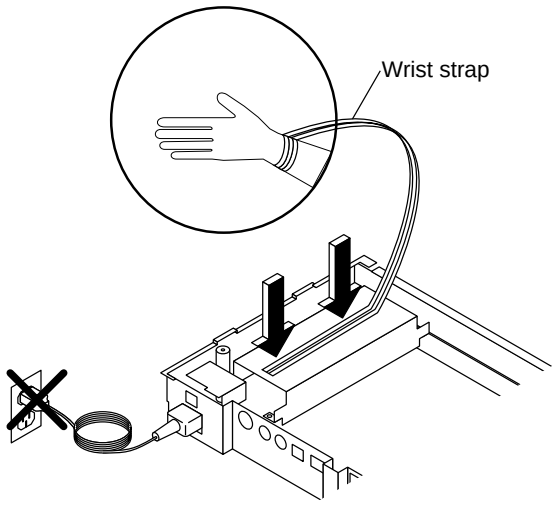
Therefore, if cables need to be serially connected, determine in advance the direction of each interface cable (master/slave) depending on how the devices are laid out and which unit provides power ON/OFF control.

■ Operation Precautions

Make sure to observe the following to prevent danger to human bodies or other serious incidents from occurring while operating the system.

◆◆ *WARNING* ◆◆

- *Be sure to turn the power switch OFF and disconnect the power plug holding it tight by hand prior to maintenance servicing, unless otherwise specified in the Service Manual.*
  If the power cable is connected, electrical hazards or short circuits can occur even though the power switch has been turned OFF.
- *The grounding wire must be connected.*
- *To avoid damages to the parts/units due to static discharge, use a wrist strap putting one end on your wrist and the other end on the grounded section of the equipment, as illustrated below.*



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FCR ID Terminal/Console

ID-T741 Service Manual

MAINTENANCE

Control Sheet

Issue date	Revision number	Reason	Pages affected
04/10/98	00	New release	All pages
12/20/98	01	Revision (FM2370)	All pages
02/20/99	02	Revision (FM2434)	Pages 1, 2, 4~6, 8~44, 46~52
03/30/99	02	Revision (FM2483)	Pages 00, 7, 45
09/24/99	03	Revision (FM2561)	Pages 0, 00, 0.1, 3, 4, 5, 9, 10, 11, 12, 16, 23, 24, 26, 34, 35
09/24/99	03	Changes in pagination (FM2561)	Pages 13~15, 17~22, 25, 27~33, 36~54
03/30/2000	04	Revision for software version B08 (FM2762)	Pages 0, 00, 9, 15, 24

MAINTENANCE

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1. Machine Specifications

■ Machine specifications

Item	Specification	Remarks
CPU	Intel 486DX4™ (100 MHz)	On-board card PC
	Pentium™ (166 MHz)	
Flash memory	Intel 486DX4 : 512KB	Incorporated in the card PC
	Pentium : 128KB	
RAM	Intel 486DX4 : Basic 4MB+32MB (SO-DIMM)	
	Pentium : Basic 8MB+64MB (SO-DIMM)	
RTC	Monthly error: 3 min; Backup period: 6 years *1	Lithium primary battery
Display	640 x 480 pixels, 256-color display (VGA)	10.4-inch, TFT color
Display controller	Trident Cyber 9320	
VRAM	Intel 486DX4 : 512KB	
	Pentium : 1MB	
Floppy disk drive	3.5-inch	
Hard disk drive	2.5-inch, 815MB or more	IDE interface
Input device	Infrared touch panel	RS-232C
External interface	CRT	15-pin mini D-sub
	Keyboard	6-pin mini DIN
	Mouse	Not available
	RS-232C (barcode reader)	8-pin DIN
	AT half-size slot	Machine internal card-edge connector
	LAN (10Base-T)	SMC91C94
	External device drive contact x 2	2-pin modular jack x 3
	Remote power supply shutoff signal contact	
Switches/ buttons	Main switch	Rocker type
	Sub-switch	Lock type
	Brightness control	
	Buzzer volume control	
Magnetic card reader	ISO (JIS-I) or JIS (JIS-II)	RS-232C
Barcode reader		RS-232C
Standard compliance (Not applicable to Pentium version)	Safety assurance: UL1950 and IEC950 (EN60950)	The EN6100 (high-power high-frequency control) standard is not applicable because the product is of a low power consumption type.
	Noise immunity: VCCI Class 1	
Employed OS	Windows NT 4.0	

*1 : This battery life prevails while the power is OFF.
The battery power is not consumed while the power is ON.

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■ Variations

● Magnetic card reader

None/ISO (JIS-I)/JIS (JIS-II)

● OS

Windows NT 4.0 Japanese edition/English edition

■ Options

● SIF04A board (serial interface option board)

This PC board has three channels of serial communication ports. It is used with the RS-422 or RS-232C interface selected. One unit of this board can be incorporated in the IDT-IV main unit.

The following devices can be serially connected to the IDT-IV.

- One unit of the 9000 Series image reader
- RIS or radiographic equipment
- IDT-IIIB

When an RS-422 interface connection is made to a 9000 Series image reader and IDT-IIIB, remote power ON/OFF control can be exercised with the serial cable internal contact signal.

● Remote power ON/OFF cable

This cable makes remote power control possible to other devices. The connector type will depend on the device.

☞ 3. Machine Overview, “3.2 Remote Power Control”
“Service Parts List, 5.5 Cables”

● Full-sized keyboard

Either the PS/2 (DOS/V) keyboard or the Windows keyboard can be used.

	PS/2 (DOS/V)	Windows
US:	101	104
Europe:	102	105

● Wall-mounting bracket

Bracket for mounting the IDT-IV on a wall

● Stand

With this stand, it is possible to use the IDT-IV in its tilted position.

● Optional software

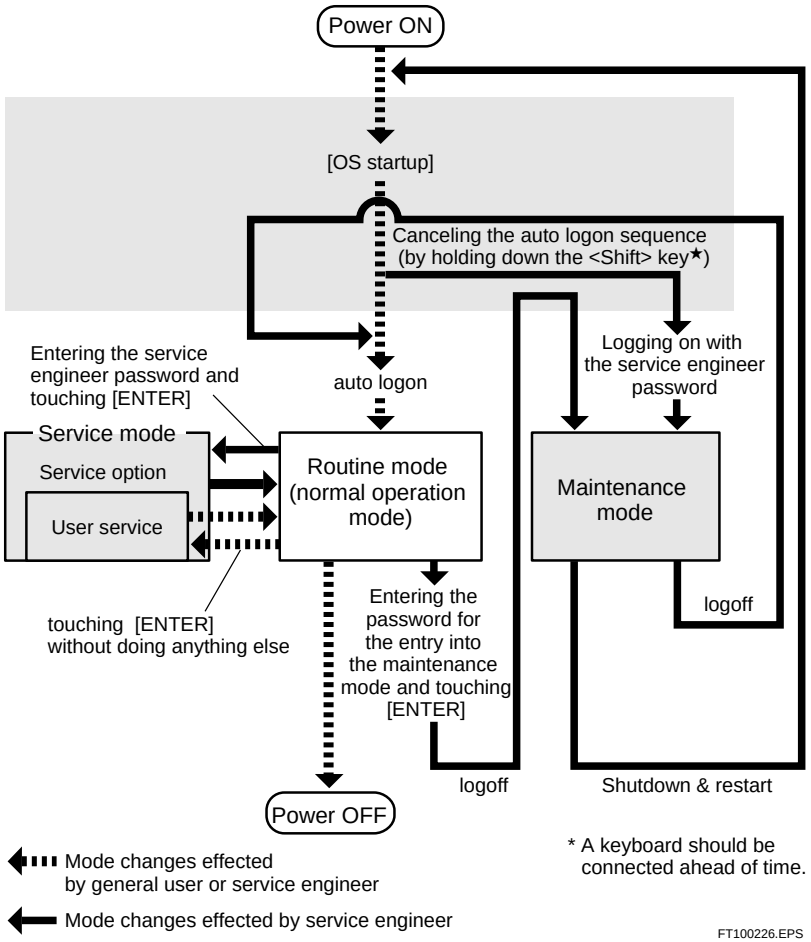
The following two software options are available. The optional software is to be supplied on floppy disks.

- Patient information on-line function
- Radiographic equipment connection function

2. Maintenance Mode and Service Mode

The IDT-IV has three processing modes: service mode, routine mode, and maintenance mode. For servicing, use the maintenance mode or service mode.

The mode transition diagram is shown below.


Power ON
[OS startup]
Canceling the auto logon sequence (by holding down the <Shift> key★)
Entering the service engineer password and touching [ENTER]
auto logon
Logging on with the service engineer password
Service mode
Service option
User service
Routine mode (normal operation mode)
Maintenance mode
touching [ENTER] without doing anything else
Entering the password for the entry into the maintenance mode and touching [ENTER]
logoff
logoff
Shutdown & restart
Power OFF
* A keyboard should be connected ahead of time.
Mode changes effected by general user or service engineer
Mode changes effected by service engineer
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★ Use the full keyboard when starting up by canceling auto logon.

2.1 Maintenance Mode

This mode is to be used by the service engineers only. It provides means of setting up the IDT-IV operating environment.

2.1.1 Entering the maintenance mode

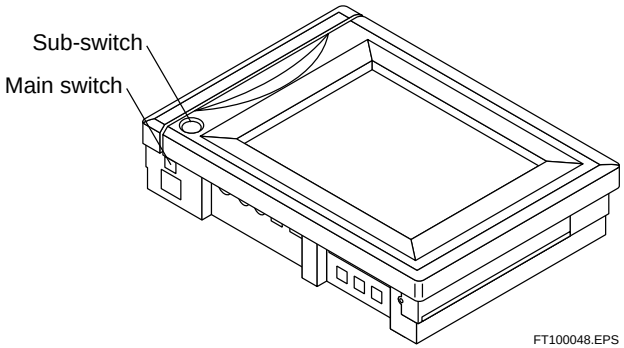
The maintenance mode can be called up either by canceling the auto logon sequence or from the routine mode. These two different maintenance mode entry procedures are described below.

■ Entering the maintenance mode by canceling the auto logon sequence [A keyboard is needed.]

The keyboard should be connected ahead of time.

(1) If the main switch is OFF, turn it ON.

(2) Turn ON the sub-switch.



(3) When the Windows NT's blue startup screen opens, press and hold down the <Shift> key until the logon message appears.

→ The logon message appears.

If the routine mode starts due to a delayed execution of step (4), switch to the maintenance mode by performing "■ Entering the maintenance mode from the routine mode" steps (4) and beyond.

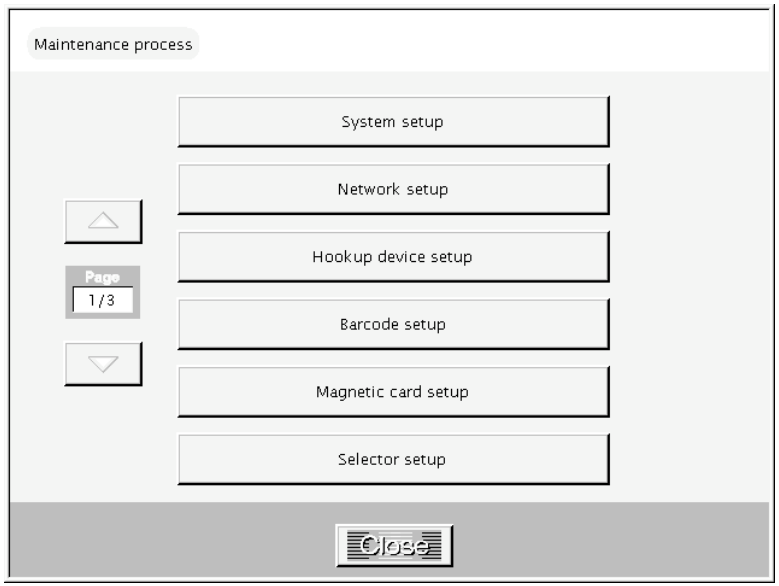
(4) Enter "fcr" as the user name.

(5) Enter "fcr" as the password.

The entered password does not appear on the display.

(6) Touch [OK].

➔ The maintenance mode is then invoked so that the "Maintenance process" menu screen appears on the display.



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■ Entering the maintenance mode from the routine mode

(1) If the main switch is OFF, turn it ON.

(2) Turn ON the sub-switch.

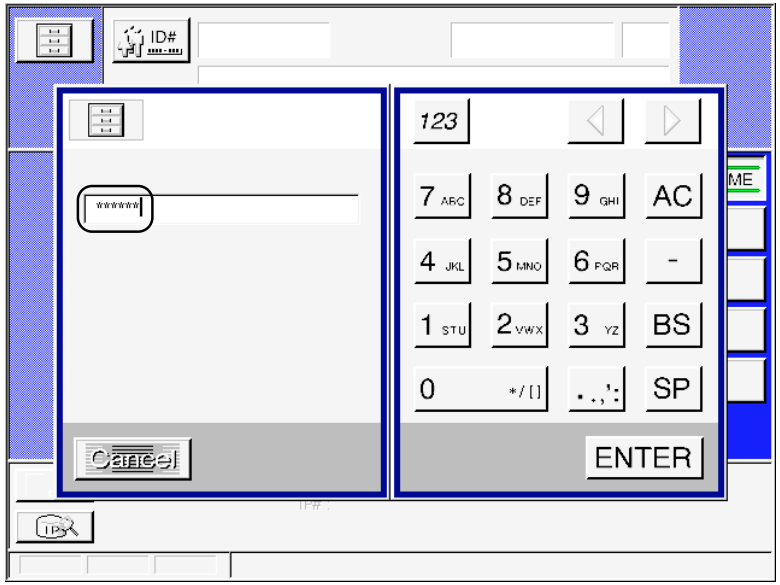
➔ The routine mode starts in about 5 minutes.

(3) Select the utility mode.

If the "Patient ID Information Input" screen is displayed, touch [Cancel] and then select the utility mode.

➔ The "Password Input" screen opens.

The password (000000, displayed as ******) for permitting the user to enter the service mode is displayed in the character string input area.



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(4) Touch [AC] to delete the default password for the user's service mode entry.

➔ The character string in the input area is then cleared.

(5) Touch [123].

➔ The upper-case alphabetical character input mode then prevails.

(6) Touch the [7], [8], [9], [4], [5], and [6] buttons in sequence and then touch [ENTER].

The password "ADGJMP" is then entered. The screen reads "******".

➔ The maintenance mode then starts with the "Maintenance process" menu screen opened.

2.1.2 Shutting down the machine from the maintenance mode

This section describes the procedure for shutting down the equipment from the maintenance mode.

(1) While the "Maintenance process" menu screen is displayed, touch [Close].

➔ The maintenance termination confirmation screen appears.

(2) Touch [Yes].

● If control panel setup has been performed from the "system setup" screen

➔ The shutdown confirmation screen appears.

Touch [No].

➔ The routine mode starts after logoff.

◆ *NOTE* ◆

Do not use the routine mode at this moment. The control panel setup does not take effect unless you shut down the machine.

● If control panel setup has not been performed from the "system setup" screen

➔ The routine mode starts after logoff.

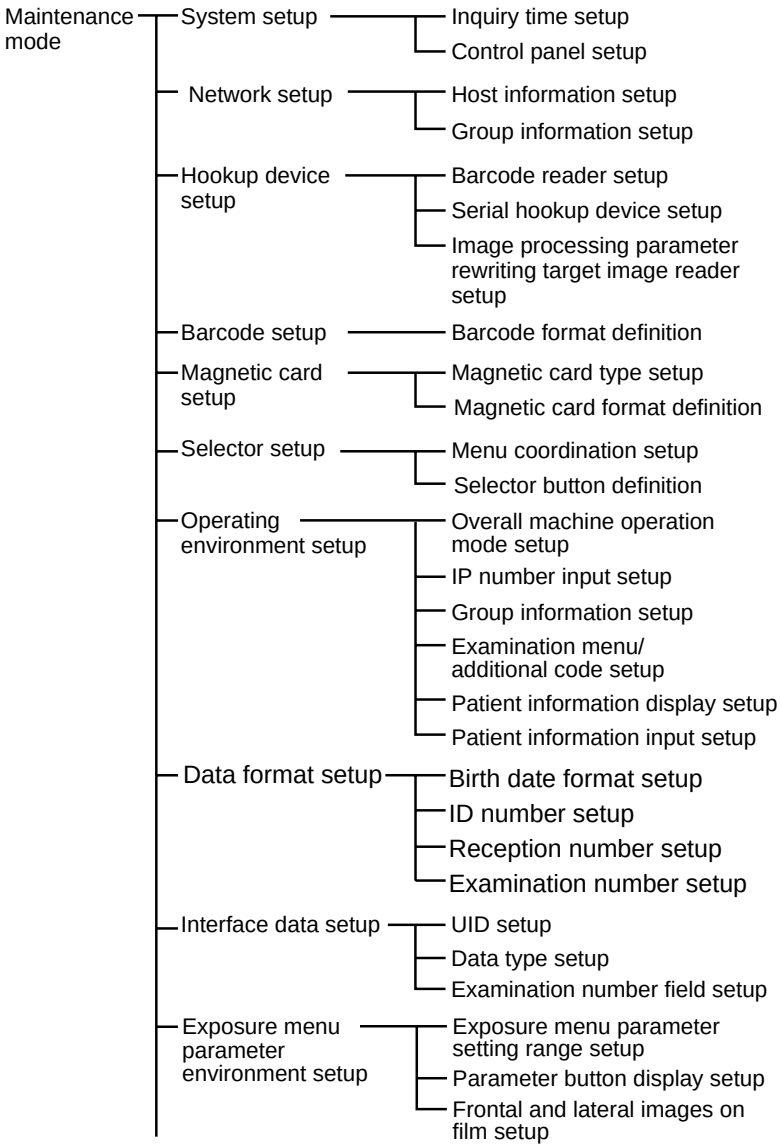
(3) Turn OFF the sub-switch.

➔ The computer shutdown screen opens. After a while, the equipment shuts down.

◆ *NOTE* ◆

Do not turn OFF the main switch. If you turn OFF the main switch during remote power supply control, the remote power ON/OFF function is disabled.

2.1.3 Maintenance menu tree diagram



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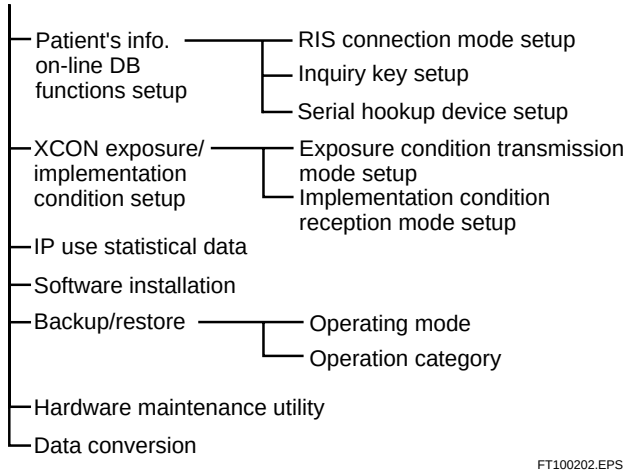

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2.1.4 Menu option list

Setup item	Function overview	Back up	Remarks
System setup	• Inquiry time setup • Network setup • Date/time setup • Keyboard setup • Regional setup • Screen saver setup	×	
Network setup	• Host information/group information setup • Host information/group information transfer • Network connection verification	○	Can be set up at the master IDT only.
Hookup device setup	• Barcode reader setup • Serial hookup device setup • Image processing parameter rewriting target image reader setup	△	
Barcode setup	• Barcode format definition	○	
Magnetic card setup	• Magnetic card type definition • Magnetic card format definition • ISO card read character code definition	○	Can be set only when the magnetic card reader is connected.
Selector setup	• Menu coordination setup • Selector button definition	△	

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Setup item	Function overview	Back up	Remarks
Operating environment setup	• Overall machine operation mode setup • IP number input setup • Group information setup • Examination menu/additional code setup • Patient information display setup • Patient information input setup	△	
Data format setup	• Birth date format setup • ID number setup • Reception number setup • Test number setup	△	
Interface data setup	• UID setup • Data type setup • Examination number field setup	△	
Exposure menu parameter environment setup	• Exposure menu parameter setting range setup • Parameter button display setup • Frontal and lateral images on film setup	△	
Patient's info. on-line DB functions setup	• RIS connection mode setup • Inquiry key setup • Serial hookup device setup	○	Can be set up when optional software is installed.
XCON exposure/ implementation condition setup	• Exposure condition transmission mode setup • Implementation condition reception mode setup	△	Can be set up when optional software is installed.
IP use statistical data	• IP use statistical data list display • IP use statistical data deletion	–	
Software installation	• Optional software/software upgrade installation from floppy disks	–	
Backup/restore	• Backing up/restoring the maintenance mode setup data	–	
Hardware maintenance utility	• Checking whether magnetic card reader, touch panel and HDD are normal or not.	–	
Data conversion	• Converting IDT-III and CSL-III menu data for IDT-IV	–	

Notes on "Backup" column

Indicates whether the setup data can be backed up and the backed-up data can be restored for use with other units of the IDT-IV.

○ : The backed-up data can be used as is for the other units of the IDT-IV.
△ : The backed-up data needs to be restored and edited for use with the other units of the IDT-IV.
× : The setup data cannot be backed up.

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2.1.5 Details of menu options

This section describes the menu options provided for the maintenance mode and their usage precautions.

■ System setup

To enable the setup, it is necessary to reboot the equipment after completion of setup.
☞ Installation, “3.3.6 Setting the system”

● Inquiry time setup

Sets the time at which date/time setup is to be performed to ensure that all the networked units of the IDT-IV agree in the date and time. This inquiry time must be set up for each slave IDT unit.

Master IDT: IDT-IV or IDC-IV for date/time and host information management. One master IDT unit must be set up for the network.
Of all the IDT-IV and IDC-IV units, the master should be the device that is operated the longest.

Slave IDT: All IDT-IV and IDC-IV units other than the master IDT.

● Control panel setup

❍ Network
☞ Installation, “3.3.6 Setting the system, ■ Setting the network"

- Computer name
  For identification purposes, a computer name is given to each device installed in the network.
  Each device should be given a different computer name. In addition, names should agree with the host names set in the section entitled "■ Network setup."
  Ex.: IDT4-1
- Work group
  The group of computers displayed, for convenience, under the same work group name when a network configuration is referred to.
  Leave the default as it is.
  Ex.: FCRIDT4
- IP address
  Number assigned to network devices for identification purposes.
  Set in the format "xxx.xxx.xxx.xxx," using a number from 0 to 255 for "xxx" portions.
  Ex.: 172.16.0.3
- Subnet mask
  In IP addresses, assigns "1" to bits handled as network nos. and "0" to portions handled as host numbers and is set as a decimal.
  Format is "xxx.xxx.xxx.xxx," using a number from 0 to 255 for "xxx" portions.
  Ex.: 255.255.255.0 (class C)
- Default gateway
  Address of router and other devices. Set as necessary.

❍ Date and Time
Set the date, time and time zone.

◆ *NOTE* ◆

Make sure to make the time zone for all IDT-IV and IDC-IV units in the network the same.

The IDT-IV and IDC-IV date/time synchronization function uses Greenwich Standard Time in the form of numerical data. For this reason, discrepancies in the time will result if the time zones for IDT-IV and IDC-IV units are different.

❍ Keyboard
Set the type of keyboard. In Japan, this does not need to be set.

❍ Region
In Japan, confirm that "Japanese" has been selected.

❍ Screen Saver
Confirm that "Screen Saver" has been selected for the screen saver and "12 min." selected for the time it will take to appear.

■ Network setup

The network information can be set up at the master IDT only.

☞ Installation, “3.3.5 Setting the network information”

● Group information setup

☞ Maintenance, “3.4.3 IP registration information management/ sharing function”

- Group name
- Gateway host name
  To be set up after host information setup.
- Comment

● Host information setup

- Host name
  Set the same computer name as was set for "● Control panel settings" under "■ System settings."
- Device ID
- IP address
- Group
- Comment

When you touch the [Ping] button in the “Host Information Edit” screen, you can verify the network connection.

■ Hookup device setup

☞ Installation, “3.7.1 Setting the hookup devices”

● Barcode reader setup

Specifies whether or not to use the barcode reader.

● Serial hookup device setup

Specifies the channels and devices to be connected.

◆ *NOTE* ◆

When connecting to RIS, make settings via the "Setting the Patient Information Online Function " screen.
RIS cannot be selected from this screen.

● Image processing parameter rewriting target image reader setup

When making settings for 9000 series, 3000 series or 9501/2 series image readers, first make the settings specified under “■ Setting the device to be connected serially.”
When making the settings for 5000/R and 5501 image readers, first register the image readers in the host information under '■ Network setup."

❍ Connection mode
Specifies whether or not to make a connection.

❍ Button caption
Sets the name of the button used for the "Image processing parameter rewriting" function available in service mode. Failure to do so will generate an error.

❍ Hookup model
Sets the connection format, "Network" or "Serial," and the model of image reader used.

❍ Parameters

- GR/RP
  These image processing parameters pertain to gradation/frequency processing.
- DRC/TAS
  These image processing parameters pertain to DR compression filter / DR compression processing.
  Sets to [ON] for the 5000/R and 5501.
- MFP
  These image processing parameters are to enable enhancement processing with artifact suppression or dynamic range compression.
  Sets to [OFF] for 9000 series image readers.
- PEM
  These image processing parameters are for granularity suppression and sharpness enhancement processing exclusively for mammography.
  Sets to [OFF] for 9000 series image readers.

■ Barcode setup

Sets the barcode type (NW7/Code39) and format.

■ Magnetic card setup

☞ Installation, “3.7.3 Setting the magnetic card”

● Magnetic card type setup

Sets the magnetic card type (Fuji card type).

● Magnetic card format definition

When a hospital’s card is to be used, its format must be defined.

- Data type
- Format
  When "Sex," "Date of Birth" or "Year or Month of Date of Birth" is selected, select the format from the ones available.
- Card offset
  Sets the data start position on the card. Set the position after "STX" (with a FUJI card, it will be the letter "F") to 0.
  Do not set "SI/SO" or "Kanji IN/OUT" code portions as starting points.
- Data length
  Sets the length of data to be read in terms of the number of letters from the card offset position.
  Do not include "SI/SO" or "Kanji IN/OUT" code portions in data length.
  For kanji data, set an even number for data length.
  Data lengths for patient ID nos., reception nos. and examination nos. should not exceed the valid number of digits set in “Setting the data formats." Excesses will result in errors.
  If the valid number of digits is not satisfied, the padding process set in "■ Setting the data formats" will be conducted.
- Storage offset
  Sets the storage position for read data.
  For example, if "2" is set, 2 spaces will be added to the front of the data when it is stored.

◆ *NOTE* ◆

The format, card offset, and data length cannot always be set up depending on the data type.

■ Selector setup

This item should be set when using multiple processing modes (IP registration processing mode and console processing mode).
☞ Installation, “3.7.4, Setting the selector”

● Menu coordination setup

Specifies whether or not to change the processing mode in coordination with the exposure menu selection.

● Selector button definition

- Button caption
  Sets the name of the selector button. Failure to do so will generate an error.
- X-ray tube and technique codes
- Operating mode
- Exposure mode transition request
  Sets when using the IDT-IV as the console. For cassette exposure, set whether to use the IP withdrawal button.
- Selector at time of startup
  Sets whether to display the selector button on the HOME screen after starting up.

● Length of time-out for exposure mode transition request

When "Exposure mode transition request" has been set to [ON], sets a number for the time-out pertaining to requests for IP withdrawal (transition to cassette exposure mode) and IP setting (transition to built-in exposure mode). Leave the default as it is.

■ Operating environment setup

☞ Installation, “3.7.5 Setting the operating environment”

● Overall machine operation mode setup

Because this setup is effective only under Japanese environments, leave this column OFF.
(DBCS: Double Byte Character System dedicated for Japanese kanji characters)

● IP number input setup

Because this setup is effective only for the magazine type image reader, leave this column OFF.

Specifies whether or not to use the [NO ID] button (which can be used when the IP barcode cannot be read by a magazine type reader).

● Group information setup

Defines the range of group numbers that are to be used for the group process and multi-frame output process.

Using an IDT-IV in the same network, make the setting so that the range of group nos. is not duplicated. Leave the default as it is.

● Examination menu/extension code settings

Set "Examination menu" to [ON] if using an examination menu. Setting "Examination menu" to [ON] also makes it possible to use the extension menu (to register multiple menus under one MPM code).

If "Examination menu" has been set to [ON], set whether to automatically have menu codes generated and the color of the menu's letters.

◆ *NOTE* ◆

Normally, “Code automatic generate” is set to [OFF].
When it is set to [ON], if one IDT-IV is operating alone, it will automatically generate extension menu codes when menus are created. However, if an ID is shared by multiple IDT-IVs, it will be necessary to register the same examination menu code at each IDT. In keeping, inputting in a mode that does not automatically generate these codes is safer.

If printing frontal and lateral images on film when using an IDT-IV as the console for the 9501/2, set "Examination Menu" to [ON], as this is the only place where frontal and lateral double-image output can be specified.

● Patient information display setup

- Patient name display mode
  Select [Main]. The [Main/Sub] setup is effective only for Japanese. If [OFF] is selected in step I. above, [Main] will be selected automatically.
  Select [Expansion] when expanding the number of characters to be displayed.
- Name of the department which requests for the service
  Formulates the display/input definition.
- Name of the department displayed in Japanese kanji characters.
  Formulates the display/input definition.
- Examination number
  Formulates the display/input definition.

● Patient information input setup

- Automatic window opening
  Specifies whether or not to automatically open the patient information input window on the routine mode HOME screen.
- Japanese kanji name input
  Specifies whether or not to use Japanese kanji characters for name input purposes. If the use of kanji is deselected in the “● Overall system operation mode” setup sequence, the system automatically inhibits the input of kanji names.

■ Data format setup

Sets the birth date and other data formats.

☞ Installation, “3.7.6 Setting the data formats”

● Birth date format setup

Specifies the birth date display/input format.

● ID number setup

- Character string length
- Padding method

● Reception number setup

- Character string length
- Padding method

● Examination number setup

- Character string length
- Padding method

■ Interface data setup

☞ Installation, "3.7.7 Setting the Interface Data"

◆ *NOTE* ◆

Make sure to set the same contents for all IDT-IV and IDC-IV units in the network.

● UID setup

- RIS UID Used
  When connected to the RIS, sets whether or not to use the study information issued by the RIS.
- UID Issue
  Sets whether or not the IDT-IV issue the study information or series information.

  After setting the UID Issue to ON, set the UID issue system.

● Data type setup

- Network IR I/F
  Defines interface between the IDT-IV and 5000/R or 5501/2. "FINP110" is available from software version A07. For this interface, the restriction fixing the patient ID numbers and examination numbers at 10 figures has been released and the data length extended.
- Serial ID online
  Sets whether to use previous interface or extended interfaces for each patient information online interface.

  Extended interface is available from software version A07. When using extended interface, select "LONG" because the data field length for the patient ID numbers or examination numbers has been extended.

● Examination number field setup

Sets which of the examination number, reception number or order number that was input in the IDT-IV is to be handled as the study number.

The number specified as the study number will be handled as the "Accession Number" when an image is output via DICOM from the Image Reader or QA-WS.

■ Exposure menu parameter environment setup

☞ Installation, "3.7.8 Setting the exposure menu parameters"

● Exposure menu parameter setting range setup

- IP logical size
  Sets the size for logical reading.
- Image reversal mode
  Sets modes for moving images 90° upward/downward/clockwise/counterclockwise.
- Filing mode
  Sets image transmission mode to the ODF.
- Image format
  Sets the format in which images are output on film.
- EDR mode
  Sets the method for setting image reading sensitivity.
- Film output count upper limit
  Sets a number between 1 and 9 for the upper limit of film output.
- Function processing
  Sets which of the 8 function codes, other than RT, to display.

  RT : Routine processing (routine exposure)
  TS : Temporal subtraction processing
  ES : Energy subtraction processing
  WS : Whole-spine processing
  PS : IVP processing
  TM : Tomographic processing
  TX : Collective temporal subtraction processing
  EX : Collective energy subtraction processing
  WX : Collective whole-spine processing

● **Parameter button display setup**

Defines the parameter button display in the routine mode and service mode.

● **Frontal and lateral double-image output setting**

This is set when printing frontal and lateral images on film with the 9501/2.

■ Patient's info. on-line DB functions setup

This setup can be performed when the optional software is installed.

● **RIS connection mode setup**

☞ "3.4.5 Patient information on-line function"

● **Inquiry key setup**

Defines the key for patient information inquiry.

● **Serial hookup device setup**

Sets the channels and devices to be connected.

● **Inquiry time-out setting**

Valid when the RIS connection mode is either [Type B] connection or [IDC4].
Leave the default (30 sec.) as it is.

■ XCON exposure/implementation condition setup

This setup can be performed when the optional software is installed.

● **Exposure condition transmission mode setup**

Specifies whether or not to transmit exposure condition data to the X-ray controller.

● **Implementation condition reception mode setup**

Specifies whether or not to receive implementation condition data from the X-ray controller.

■ IP use statistical data

Used to confirm the IP use status.

● **IP use statistical data list display**

● **IP use statistical data deletion**

■ Software installation

Used to install the optional software or software update from floppy disks.

■ Backup/restore

Backs up the maintenance mode setup data onto or restores it from floppy disks.

● **Operating mode setup**

Chooses between the backup and restore functions.

● **Operation category setup**

Chooses between machine-specific data and common system data.

■ Hardware maintenance utility

Checks the following for precision or whether normal or not.
☞ Installation, “Appendix 2 Hardware Maintenance Utility”

- MCR (magnetic card reader)
- BCR (barcode reader)
- LCD
- Buzzer
- Touch (touch panel)
- SIF04A
- Network
- HDD
- FDD
- KB (keyboard)
- RTC (date and time)

■ Data conversion

Converts the IDT-III and CSL-III menu data for the IDT-IV.
☞ Installation, “Appendix 3 Data Conversion Procedures”

2.2 Service Mode

The service mode is to be used by the service engineers and general users. However, the “Updating Parameters of All Menus” and “Updating X-ray Exposure Parameters of All Menus” functions offered by the service mode are for the service engineers only.

For the functions to be used by both the service engineers and general users, refer to the operation manual.

2.2.1 Entering the service mode

To enter the service mode, proceed as directed below.

(1) If the main switch is OFF, turn it ON.

(2) Turn ON the sub-switch.

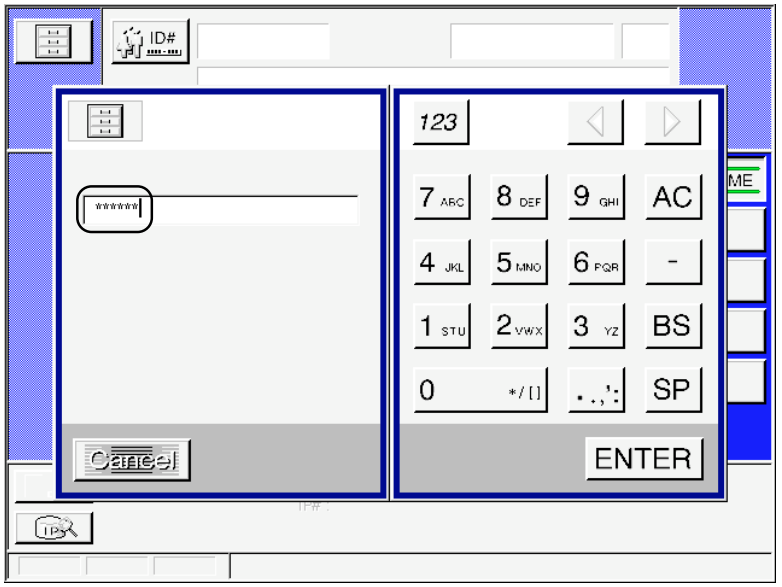
→ The routine mode starts in about 5 minutes.

(3) Select the utility mode.

If the “Patient ID Information Input” screen is displayed, touch [Cancel] and then select the utility mode.

→ The “Password Input” screen opens.

The password (000000, displayed as ******) for permitting the user to enter the service mode is displayed in the character string input area.



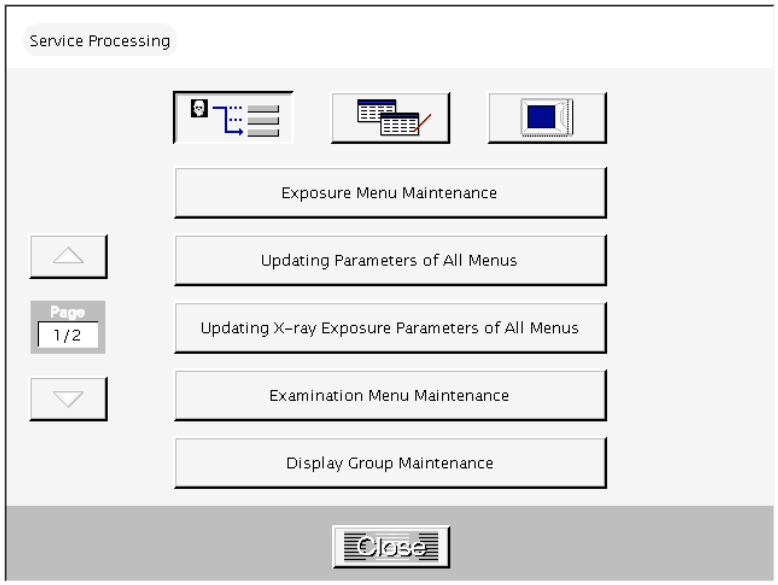
FT100011.EPS

(4) Touch [AC] to delete the default password for user's service mode entry.

➔ The character string in the input area is then cleared.

(5) Type in "111111" as the password and then touch [ENTER]. The screen then reads "******".

➔ The service mode is then invoked so that the "Service Processing" screen opens.



FT100204.EPS

2.2.2 Shutting down the machine from the service mode

This section describes the procedure for shutting down the equipment from the service mode.

(1) While the service main screen is displayed, touch [Close].

➔ The servicing confirmation screen opens.

- To shut down the equipment after saving your service mode setup data editing

  Touch [Yes].

  ➔ The routine mode starts.

- To shut down the machine without saving your service mode setup data editing

  Touch [No].

  ➔ The routine mode starts.

◆ *IMPORTANT* ◆

To shut down the equipment without saving your data editing, be sure to perform step (2). Your service mode setup data editing is retained until the machine shuts down.

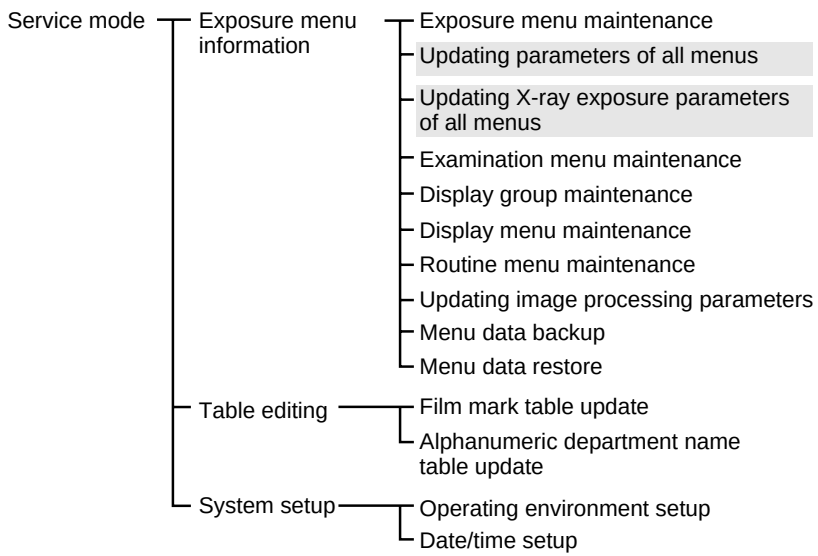
(2) Turn OFF the sub-switch.

➔ The computer shutdown screen opens. The machine shuts down after a while.

◆ *NOTE* ◆

Do not turn OFF the main switch. If you turn OFF the main switch while remote power supply control is exercised, the remote power ON/OFF function is disabled.

2.2.3 Service menu tree diagram



: Menus that are used by the service engineers only.
These menus are displayed when password "111111" is used.

FT100203.EPS

2.2.4 Updating parameters of all menus

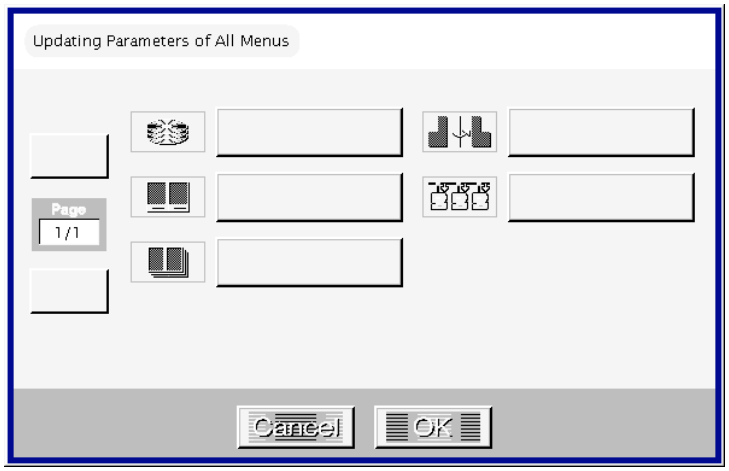
To update the parameters common to all exposure menus at a time, perform the following procedure.

◆ NOTE ◆

This procedure must be performed by permission of the operation administrator. Updated parameters will be reflected in all exposure menus.

(1) While the service main screen is displayed, select [Updating Parametrs of All Menus].

→ The "Updating Parameters of All Menus" screen opens.



FT100205.EPS

: Image filing (image transmission to the ODF)

: Image style (90° upward/downward/clockwise/counterclockwise)

: Image format (image output format on film)

: Distribution code (an 8-digit code that specifies the image distribution destination)

: Film output count

: Pixel density (sets whether standard image or high-quality image)

(2) Select the parameter to be edited.

➔ The Setup screen opens.

(3) Update the parameter.

➔ You are returned to the "Updating Parameters of All Menus" screen.

To update two or more parameters, repeat steps (2) and (3) as needed.

(4) Touch [OK].

➔ You are returned to the service main screen.

2.2.5 Updating X-ray exposure parameters of all menus

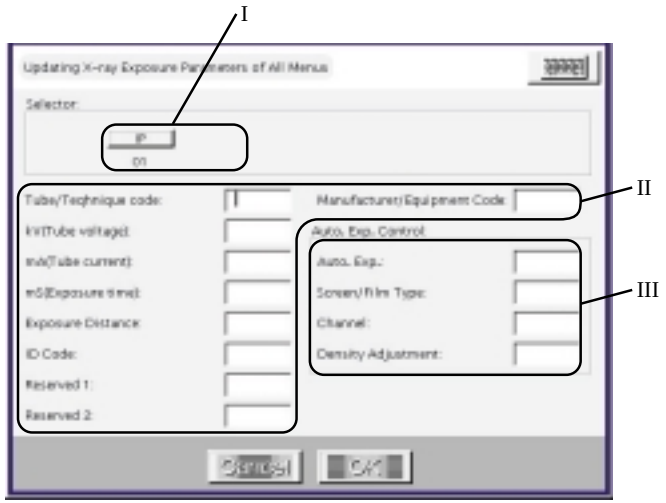
To update the X-ray exposure condition data collectively, perform the following procedure.

◆ *NOTE* ◆

This procedure must be performed by permission of the operation administrator. Updated exposure condition data will be reflected in all exposure menus.

(1) While the service main screen is displayed, select [Updating X-ray Exposure Parameters of All Menus].

➔ The "Updating X-ray Exposure Parameters of All Menus" screen opens.



FT100206.EPS

I. Select a selector button that defines your updating.

II. Update parameters.

III. Set the Auto. Exp. Control items as required.

(2) Touch [OK].

➔ You are returned to the service main screen.

Following are the X-ray controller specifications.
Items shown in dots in the table below should be set up on the "Updating X-ray exposure parameters of all menus" screen.

Item \ Model	DHF-155H (S)	UD150B/B-10 HLZ110 (Tomography)	SUPER 50 CP	Polydros50S	KXO-80F KXO-50F
Communication I/F spec. **Common for semi-duplex and start/stop system.** **According to JIS X-5002.**	RS232C 4800BPS Start: 1bit Data: 8bits Parity: 1bit (even) Stop: 1bit D-sub25p male straight (provided by the maker)	UD150B: RS232C HLZ110: RS422 4800BPS Start: 1bit Data: 8bits Parity: 1bit (even) Stop: 1bit UD150B: D-sub25p male cross (provided by Fuji) HLZ110: D-sub25p male cross (provided by the maker)	RS232C 4800BPS Start: 1bit Data: 8bits Parity: 1bit (even) Stop: 1bit D-sub25p male cross (the same cable as the maker's will be provided by Fuji)	RS232C 4800BPS Start: 1bit Data: 8bits Parity: 1bit (even) Stop: 1bit D-sub25p male cross (provided by Fuji)	RS232C 4800BPS Start: 1bit Data: 8bits Parity: 1bit (even) Stop: 1bit D-sub25p male cross (provided by Fuji)
Function	IDT → X-ray exposure conditions setup kVmAms X-ray exposure conditions → actual IDT exposure results kVmAms	IDT → X-ray exposure conditions setup kVmAms X-ray exposure conditions → actual IDT exposure results kVmAms	IDT → X-ray exposure conditions setup APR code X-ray exposure conditions → actual IDT exposure results kVmAms	IDT →X-ray exposure conditions setup Mode selection code X-ray exposure conditions → actual IDT exposure results kVmAms	IDT → X-ray exposure conditions setup kVmAms X-ray exposure conditions → actual IDT exposure results kVmAms KXO 50F is only for X-ray exposure conditions setup → IDT
X-ray tube/ technique code	X-ray tube: Fixed at 0. (Select according to the technique.) Techniques 1 to 8 1: General exposure 2: Bucky - 1 3: Bucky - 2 4: AUX1 5: Tomography 6: Spot 7: Continuous exposure 8: AUX2	X-ray tube: Fixed at 0. (Select according to the technique.) Techniques 1 to 5 (8 at max.) 1: Spot 2: Bucky - 1 3: Bucky - 2 4: General exposure 5: Tomography	X-ray tube: Fixed at 0. (Select according to the technique.) Techniques 1 to 9 Reserved	Fixed at 0. Manually selected by the controller.	IDT→ X-ray is not effective. Only X-ray→ IDT is effective. 00: BUCKY1 01: BUCKY2 02: GEN1/BKY3 03: GEN2 04: TOMO WO.APR 05: TOMO WITH APR 06: MAMMO 07: SPOT 08: SPOT-ATR 09: ANGIO 10: ANGIO WITH KVR
Exposure/ perspective flag	Without perspective flag: Fixed at 0.				
Film-related code	Invalid 00000000				
Maker/model code	11: DHF-155H 10: CR-250 (Perspective/tomography)	01: UD150B 00: HLZ110	30	40	20
Tube voltage (kV)	20~150	20~150	Invalid 0	Invalid 0	20~150
Irradiation time (ms)	1~8000	1~8000			3~9999
Tube current (mA)	10~630,1250	10~1000	X-ray→ actual IDT result is effective.	X-ray→ actual IDT result is effective.	10~1000 20, 50, 100, 160, 200, 250: Small focus 320, 400, 500, 640, 800: Large focus
ID code	1 to 64, techniques (512 programs in total)	0	1 to 16 or 1 to 32	1~7	0
Reserved 1	mAs mode: 5 to 8000 If mAs mode is not used (normal): 0	0	0	0	0
Reserved 2	Focus size specified 0: Small focus 1000: Large focus	Focus size specified 0: Small focus 1000: Large focus	0	0	0
Film sensitivity	2: Standard	0: Standard	0: Standard	0	0
Detection field	1~4	1~4	1~4		
Film density	3: ± 0 standard	4: ± 0 standard	4: ± 0 standard		

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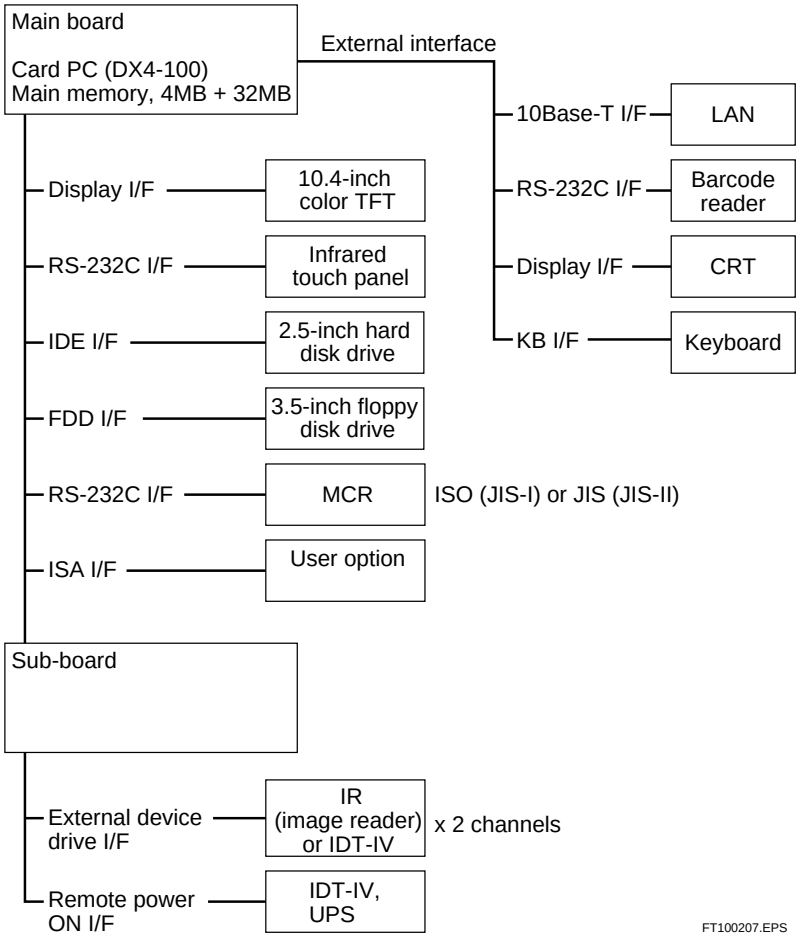
3. Machine Overview

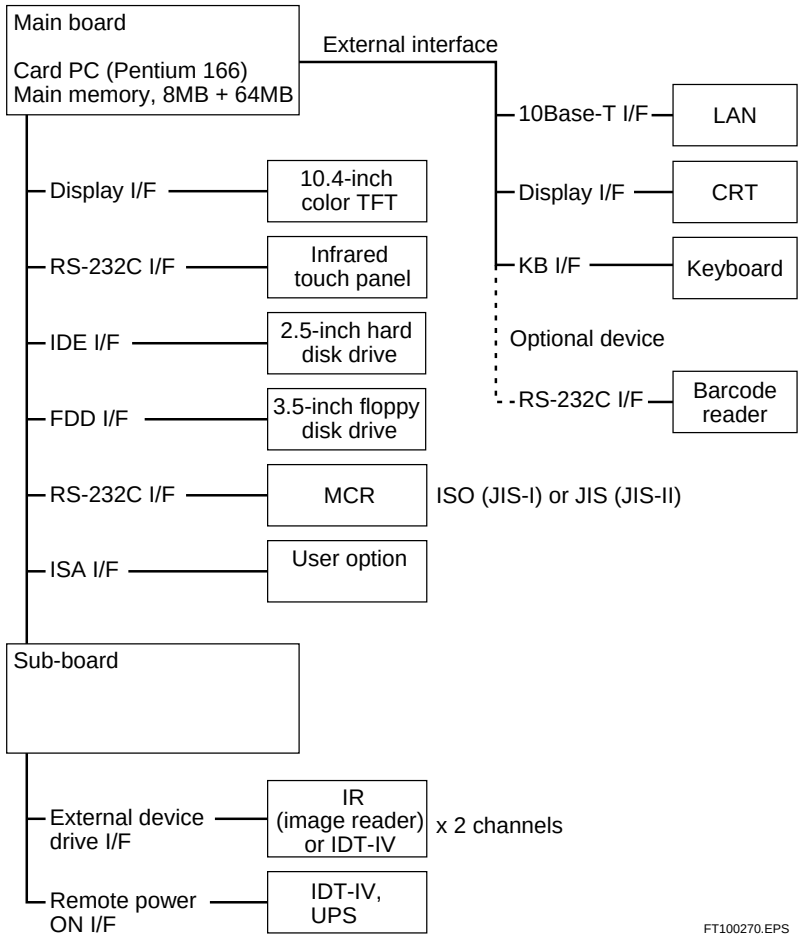
3.1 Internal Structure

■ System configuration

● 486DX4-100MHz

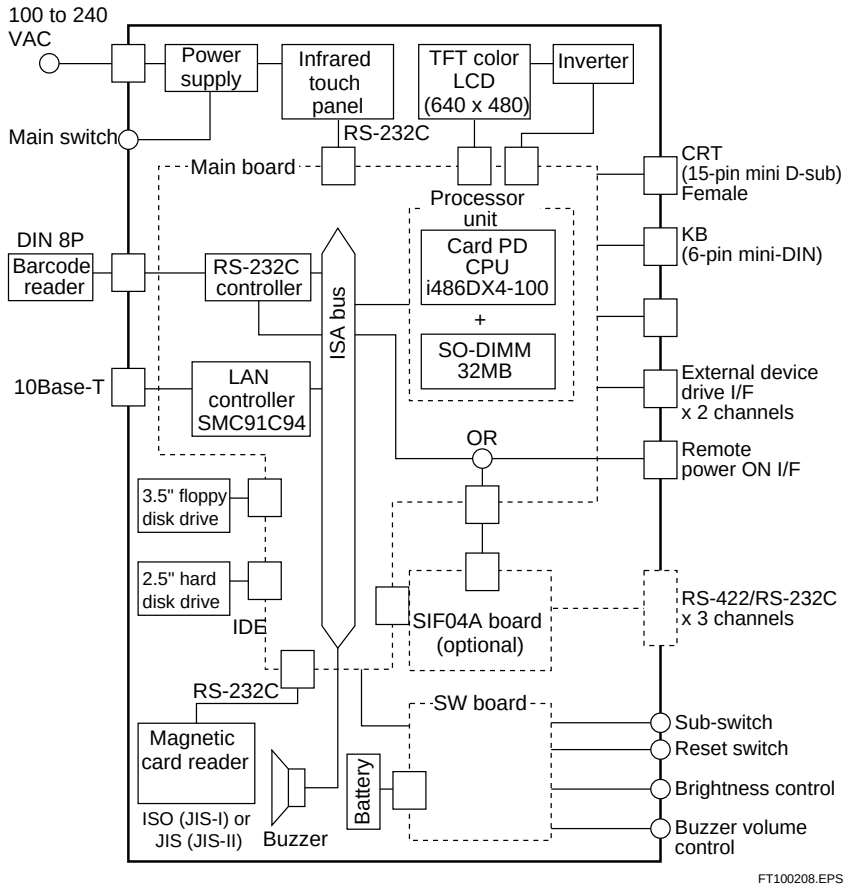


● Pentium-166MHz

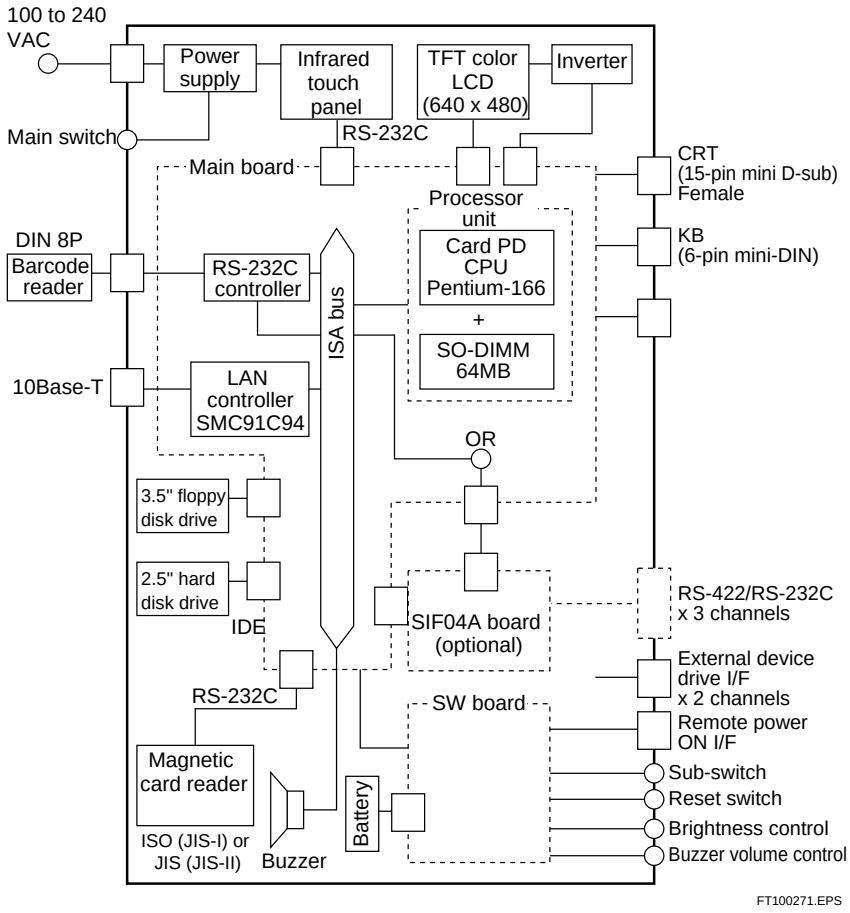


■ Block diagram

● 486DX4-100MHz



● Pentium-166MHz



3.2 Remote Power Supply Control

Remote power supply control is described below.

■ Power supply control between serially connected devices

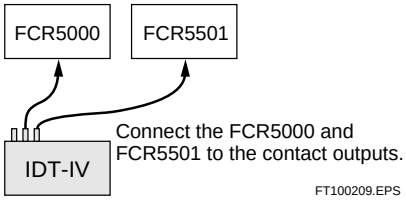
Remote power ON/OFF control is provided according to the serial cable internal contact signal.

■ Control based on contact input/output

Contact inputs/outputs are usually used for remote power supply control of a network connection.
Contact input/output based remote power supply control is described below.

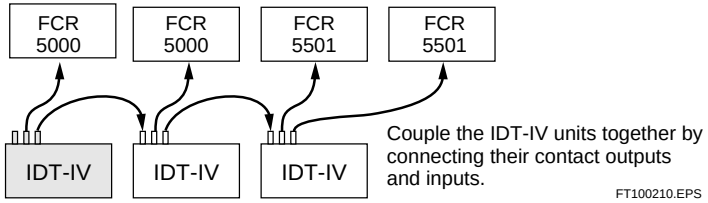
- The IDT-IV has one contact input and two contact outputs for remote power supply control.

  Remote power ON/OFF control is provided by connecting the IDT-IV contact outputs to the networked FCR5000 and J-built-in.



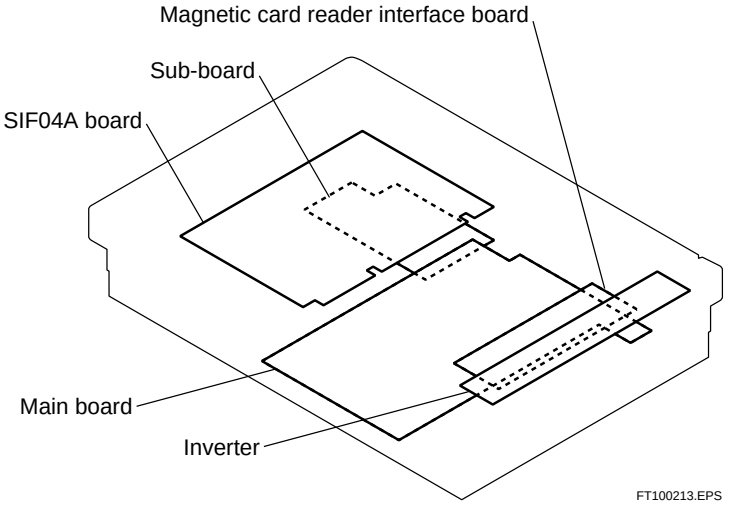
- Remote power ON/OFF control over the overall system is provided by interconnecting IDT-IV units (between contact input and contact output).

  Note, however, that it takes a significant amount of time for the IDT-IV to complete a termination process. When this method is employed, therefore, a considerable amount of time is required for overall system power OFF.



3.3 Setting the Boards

■ Board locations

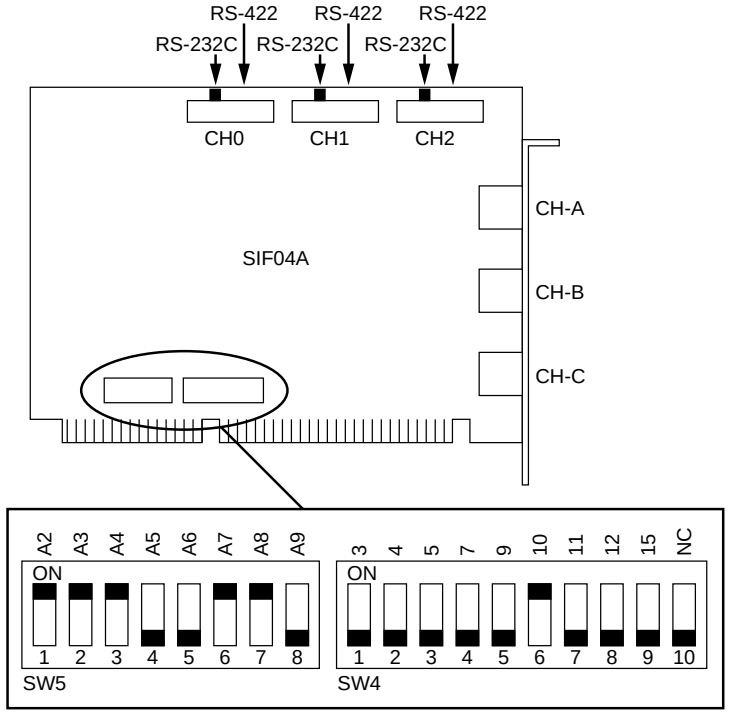


■ SIF04A board

Use the CH0, CH1, and CH2 to choose between RS-422 and RS-232C. The CH0, CH1, and CH2 correspond to the following connectors.

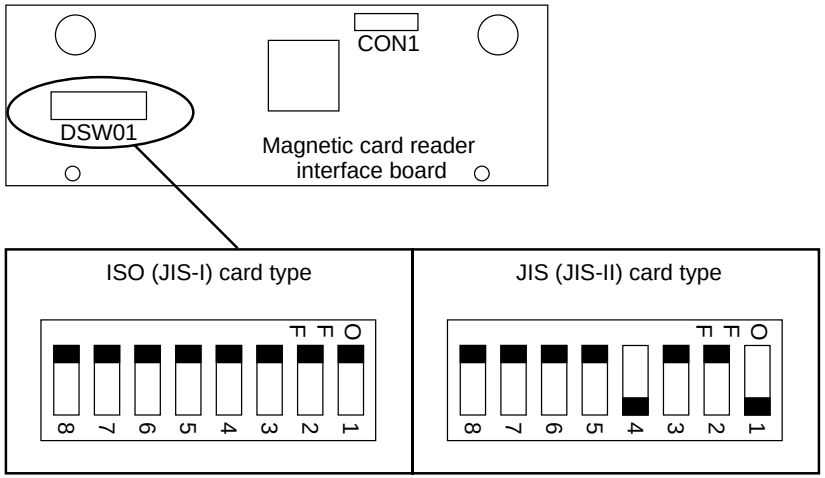
CH0: CH-A; CH1: CH-B; CH2: CH-C

When setting the CH0, CH1, and CH2, confirm the interface (RS-422 or RS-232C) employed for the connected devices.



■ Magnetic card reader interface board

Use the DSW01 to choose between ISO (JIS-I) and JIS (JIS-II). Since this setup has been completed at factory prior to shipment, there is no need to change the DSW01 setting at the time of installation or replacement.



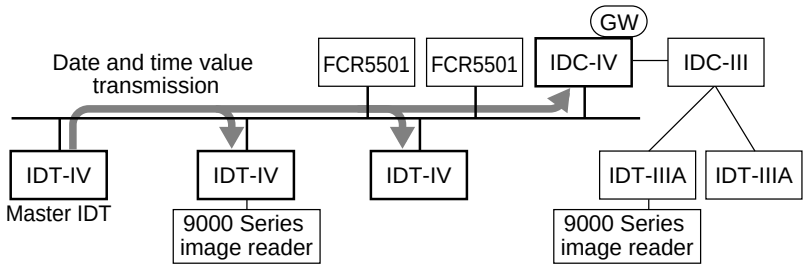
FT100215.EPS

3.4 System Connection Configuration

3.4.1 Date/time management function

When connecting two or more units of the IDT-IV or IDC-IV to the network, be sure to install one master IDT.

To ensure that all the networked IDT-IV units and IDC-IV units agree in date and time, the master IDT and slave IDT units are adjusted for date/time agreement at system startup and at the time preselected for each slave IDT.



FT100216.EPS

3.4.2 HOST information management

The host information set up at the master IDT is distributed to the slave IDT units.

Only the master IDT is capable of editing the host information. Therefore, when adding a unit of the IDT-IV or IDC-IV to the network, all you have to do is update the master IDT host information.

3.4.3 IP registration information management/sharing function

The IDT-IV uses the IP information database on the local disk to manage registered IP registration information (IP information). The IDT-IV also has an IP information sharing function, which makes it possible to share the IP information with other networked elements. The IP information is maintained in the form of a distributed database on the network.

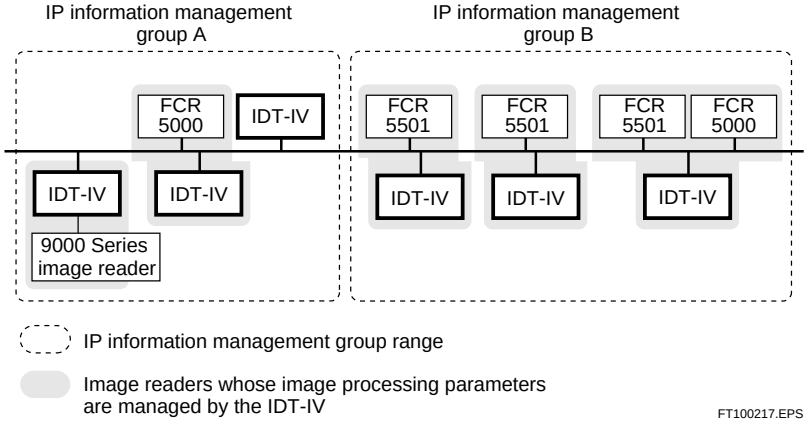
If the IP information requested by one image reader is not found in this equipment, inquiries are sent to other networked IDT-IV units so that the requested information can be retrieved.

■ IP information management group

No logical limitations are imposed on the number of IDT-IV, IDC-IV, and image reader units on the networked. However, if the number of networked units increases (20 or more), the volume of communications exchanged among the IDT-IV units increases, thereby reducing the response performance of IP information. It is also possible that IP registration may be improperly completed if some IDT-IV units are used while the others are turned OFF.

To assure adequate response performance and facilitate partial operations, IP information management groups are set up to share the IP information as illustrated below.

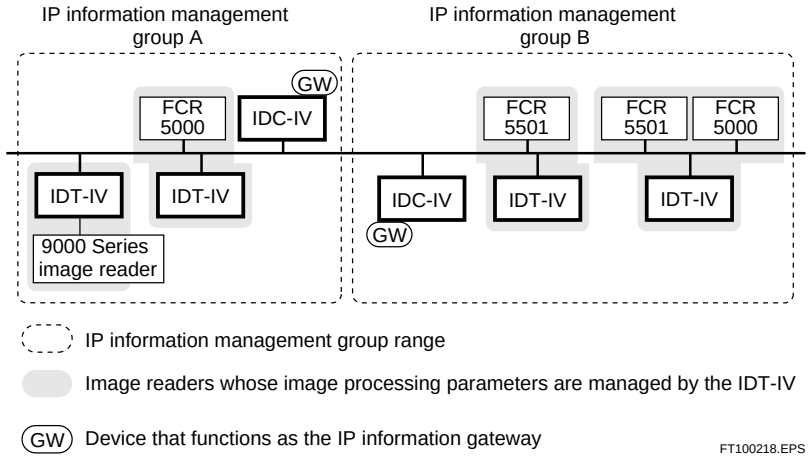
If the number of networked IDT-IV or IDC-IV units exceeds 20, add group B.



FT100217.EPS

■ IP information gateway

One IP information gateway is set up for each IP information management group. If the IP information requested by a certain image reader is not found within the local group, inquiries are sent to the other groups via the IP information gateway so that the requested information can be retrieved from the shared IP information database.

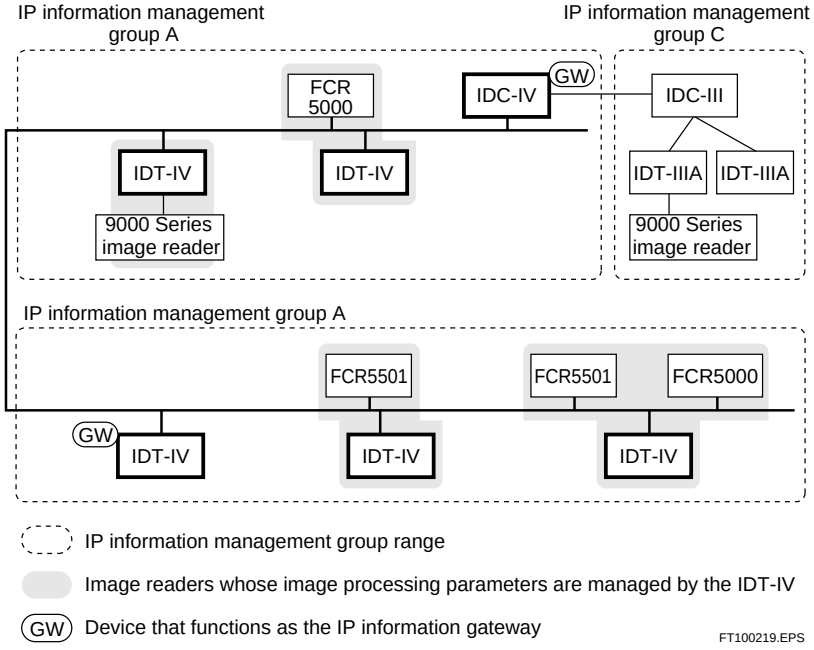


FT100218.EPS

■ Sharing the IP information with 9000 Series equipment including the IDC-III

The 9000 Series equipment including the IDC-III is handled as one IP information management group. The IDC-III is serially connected to a networked IP information gateway to share the IP information. In this case, the IDC-III functions as the IP information gateway for the 9000 Series equipment.

If there are two or more groups of the IDC-III/9000 Series equipment, the response performance lowers due to serial communication speed limitations. Therefore, the system must be configured in such a manner that only one group of the IDC-III/9000 Series equipment exists.



3.4.4 Connection of multiple units of image reader

One unit of the IDT-IV can perform the IP registration process and the console process for up to two units of the FCR5501/2. This function is designed on the presumption that an X-ray room is equipped with one unit of the IDT-IV, one unit of the FCR5000/R, and two units of the FCR5501/2.
If the two units of the FCR5501/2 are installed separately in two X-ray rooms, each room must be equipped with the IDT-IV.

- Console function
  Exposure menu and patient information input from an FCR5501/2
- IP registration function
  IP barcode, size, exposure menu, and patient information input from a cassette image reader
  As regards the IP processing image reader, the IDT-IV does not differentiate between the FCR5000/R and a 9000 Series image reader.

This section explains the following subjects which should be given due consideration when multiple units of the image reader are to be connected.

- Configuration of the connection to the image reader
- Processing mode changeover
- X-ray apparatus coordination with processing mode

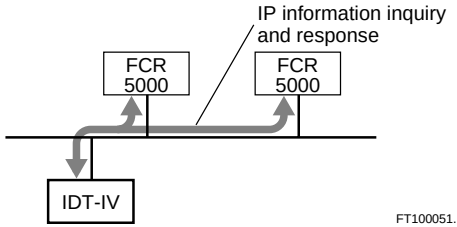
■ Configuration of the connection to the image reader

As regards the connection between the IDT-IV and image reader, the following configurations are currently supported.

- Network connection to the FCR5000/R
- Network connection to the FCR5501/2
- Serial connection to the 9000 Series cassette/magazine type image reader

● Network connection to FCR5000/R

The IDT-IV responds to the IP information inquiries sent from a networked unit of the FCR5000/R. The IP registration function can be used.

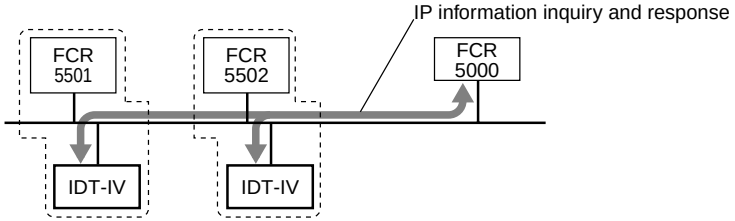


● Network connection to the FCR5501/2

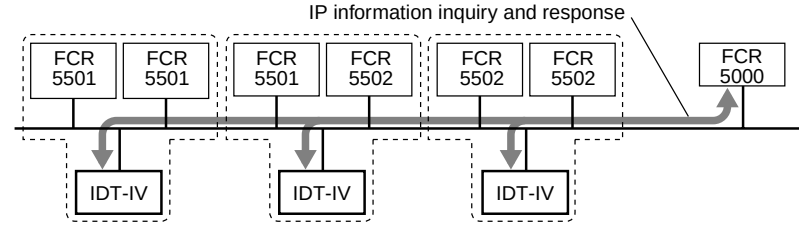
The IDT-IV can be used as the console for up to two units of the FCR5501/2. When used in such a manner, the IDT-IV responds to IP information inquiries sent from any networked FCR5000 unit. Further, the IP registration function can be exercised for a cassette image reader that is installed in the same X-ray room.

When the IDT-IV is used as a console for two units of the FCR5501/2, any FCR5501 and FCR5502 combination of standing and prone position types will do.

When the IDT-IV is used as a console for one unit of the FCR5501/2

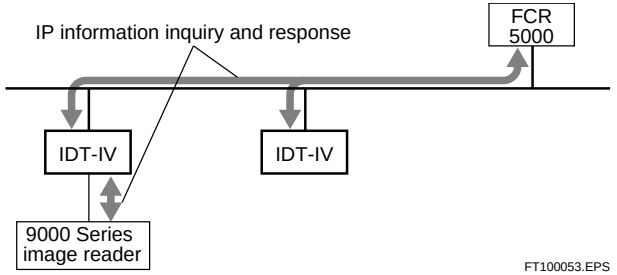


When the IDT-IV is used as a console for two units of the FCR5501/2



● Serial connection to 9000 Series cassette/magazine type image reader

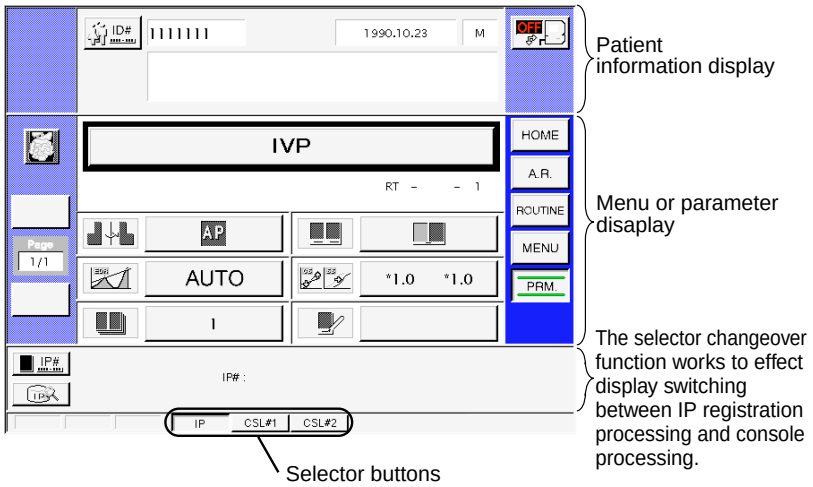
The IP registration function is always used. The IDT-IV responds to the IP information inquiries from a networked unit of the 9000 Series cassette/magazine type image reader and the IP information inquiries from a networked unit of the FCR5000/R.



■ Processing mode changeover

The IDT-IV has a selector changeover function. When two or more image readers are connected, processing mode changeover (between the IP registration processing mode and console processing mode) is effected by the selector changeover function.

When the processing mode is changed, the display at the bottom of the IDT-IV operation screen changes accordingly.



FT100055.EPS

The selector changeover is effected in either the Manual mode or the Auto mode.

- Manual
  You have to press a selector button at the bottom of the routine mode screen to switch to a desired processing mode.
- Auto
  An appropriate selector button is automatically selected according to the exposure menu selection so as to effect processing mode changeover. In this mode, the processing mode can also be changed by pressing a desired selector button as is the case of the Manual mode.

If the employed setup is such that only one selector button is used, no selector button is displayed in the screen.

● First-/second-level menu

The IDT-IV has only one set of the first-/second-level menu.

The anatomical regions displayed in the anatomical region selection screen remain unchanged even if the processing mode is changed. The menus displayed in the menu selection screen and routine menu selection screen also remain unchanged when the processing mode is changed.

● Exposure menu default parameters

The IDT-IV has only one set of the exposure menu parameter table.

Note, however, that the information about IP logical sizes and read positions is retained in a field within the exposure menu database separately from the parameter table.

When the processing mode is changed after exposure menu selection, the IP logical size/read position information is updated to the exposure menu default values for the image reader model targeted for processing.

■ X-ray apparatus coordination with processing mode

As is the case with the IDT-III, the IDT-IV is serially connected to the XCON so that changeover is effected between the X-ray exposure condition data transmission function and exposure result reception function in coordination with the exposure menu selection.

The specifications for exposure result film output are the same as for the IDT-III.

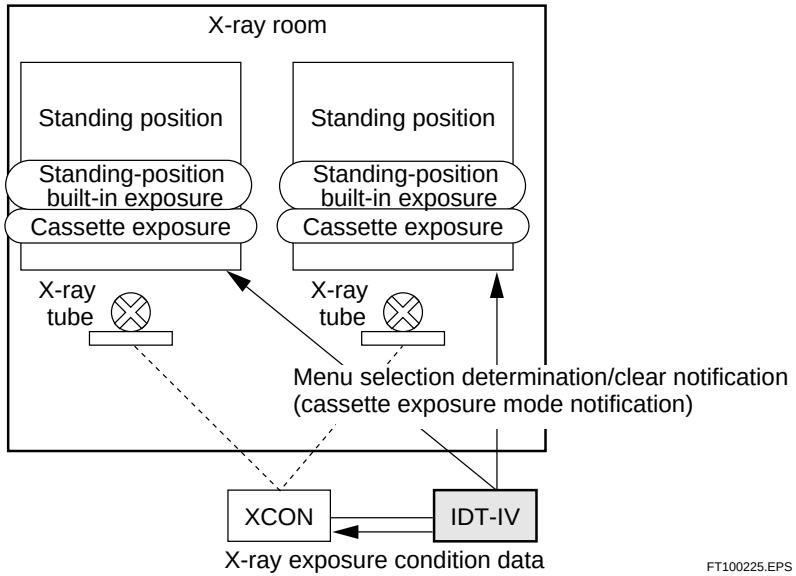
The use of the exposure condition data transmission/exposure result reception function is to be defined in accordance with the XCON exposure/implementation condition setup.

● Selector function

When setup is completed so as to transmit X-ray exposure condition data, the selector functions as a technique selector which changes the X-ray tube/technique code.

When the selector is used as the technique selector for X-ray tube/technique code changeover and not as a processing mode selector, the selector is displayed even when there is only one processing mode.

Up to six selectors can be defined. The selector-processing mode relationship is n:1.



In large hospitals, two to three X-ray tubes are usually installed in an X-ray room and each exposure stand is provided with an X-ray tube.

In small- and medium-size hospitals, on the other hand, only one X-ray tube is usually installed in an X-ray room.

Therefore, when, for instance, two exposure stands are provided in an X-ray room, exposures are made while changing the X-ray tube orientation.

Even if the same exposure stand is used to make cassette exposures, the technique code varies depending on whether Bucky's device is used. In the case of an FCR5501, the technique code varies depending on whether the FCR5501 exposure or cassette exposure mode is used.

In general, the exposure menu selection determines the technique code, and the technique code determines the X-ray tube to be employed.

◆ *NOTES* ◆

- *When the IDT-IV is used as a console for the FCR5501 image reader, the X-ray tube/technique code for built-in exposure is always displayed on the selector definition table. Therefore, if the X-ray tube/technique code fed from the XCON parameter table is not entered in the selector definition table, the IP registration processing mode prevails.*

- *When an exposure menu is added or deleted in the service mode, it is also added to or deleted from the XCON parameter table no matter whether the XCON is connected. However, if the XCON connection is not designated, default value setup automatically takes place without causing the user to be conscious of XCON parameter setup.*

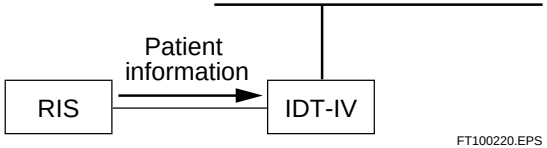
3.4.5 Patient information on-line function

The patient information is acquired on-line with the IDT-IV connected to the HIS/RIS terminal. As the interface to the HIS/RIS terminal, the following types are available.

Type A, Type B, HOST connection, Type C, Type D

■ Type A

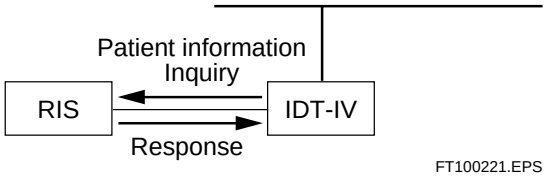
A 1:1 serial connection is made to the HIS/RIS terminal. The patient information transferred by a trigger on the RIS side is acquired.



FT100220.EPS

■ Type B

A 1:1 serial connection is made to the HIS/RIS terminal. The IDT-IV sends an inquiry about specific patient information to the RIS, using the patient ID number, study number, and reception number as the key, and acquires the patient information.

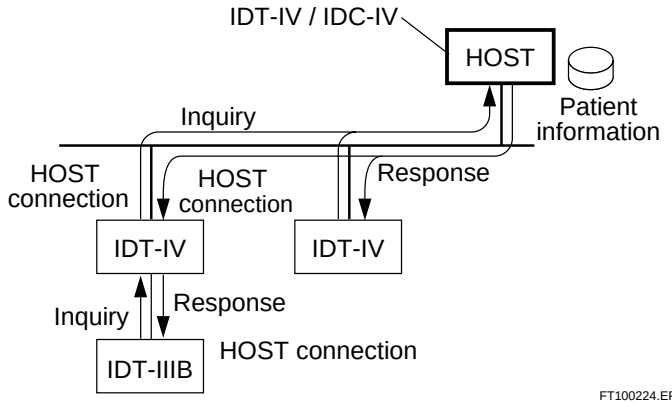


FT100221.EPS

■ HOST connection

The IDT-IV sends an inquiry about specific patient information to the HOST which manages the patient information database, using the patient ID number, study number, and reception number as the key, and acquires the patient information.

When the IDT-IIIB is connected to the IDT-IV, the IDT-IV receives an inquiry about patient information from the IDT-IIIB and sends the inquiry to the HOST. When the patient information is acquired from the HOST, the IDT-IV sends it to the IDT-IIIB which has requested it.



FT100224.EPS

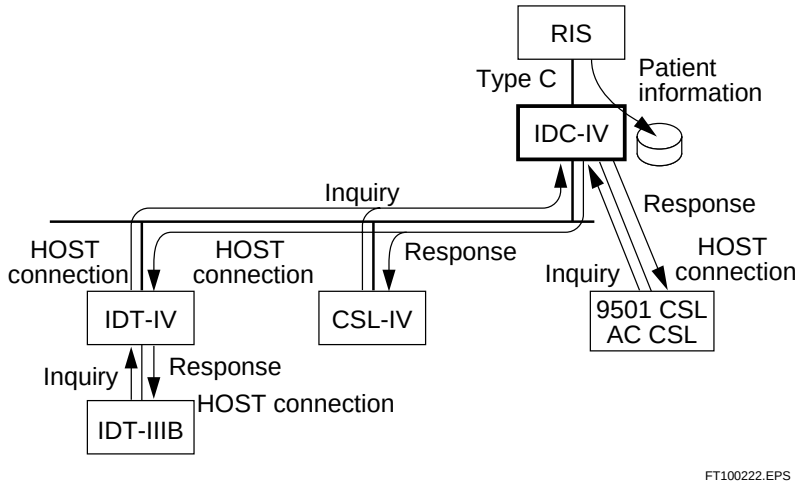
■ Type C

Type C provides an on-line process for the network and an on-line process for situations where the IDC-III/9000 Series equipment coexists with the networked equipment.

● On-line process for the network

The patient information sent from the RIS is stored in the database on the local disk. Patient information inquiries from networked IDT-IV units and connected 9501/AC CSL units are answered. The IDC-IV is used as the HOST.

The patient information database managed by the HOST is a database that stores information for a limited period. The database is checked at system startup and at a predetermined time each day. The written information is deleted when it is older than specified (usually when it is more than one day old).



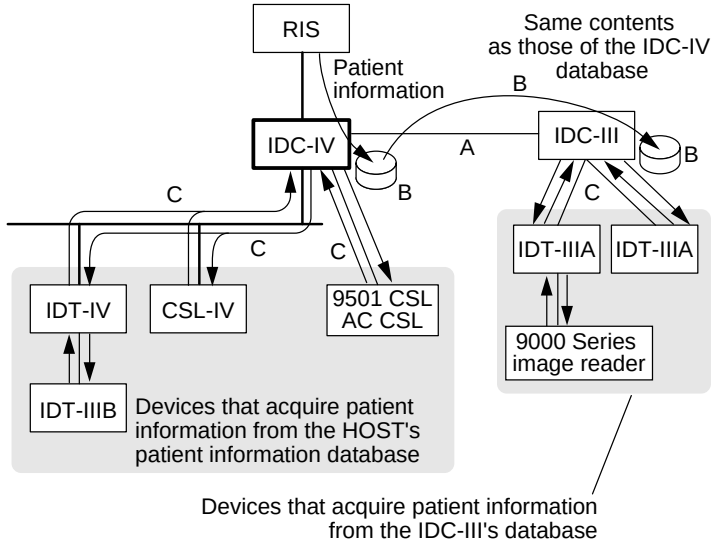
● On-line process for situations where the IDC-III/9000 Series equipment coexists with the networked equipment

The process is described by paragraphs A through C below.

A. When both the networked equipment and 9000 Series equipment use the patient information on-line function in an environment where the IDC-III/9000 Series equipment exists in the network, the HOST is to be connected to the IDC-III in which the on-line kit is installed.

B. The HOST not only acquires the patient information from the RIS and stores it in the database on the local disk, but also transfers it to the IDC-III. Basically, the HOST and IDC-III manage the same patient information contents.

C. When the 9000 Series equipment coexists with the networked equipment, the HOST responds to the patient information inquiries from networked units of the IDT-IV and the 9501/AC CSL units serially connected to the HOST. The IDC-III responds to the patient information inquiries from the devices connected to the IDC-III.



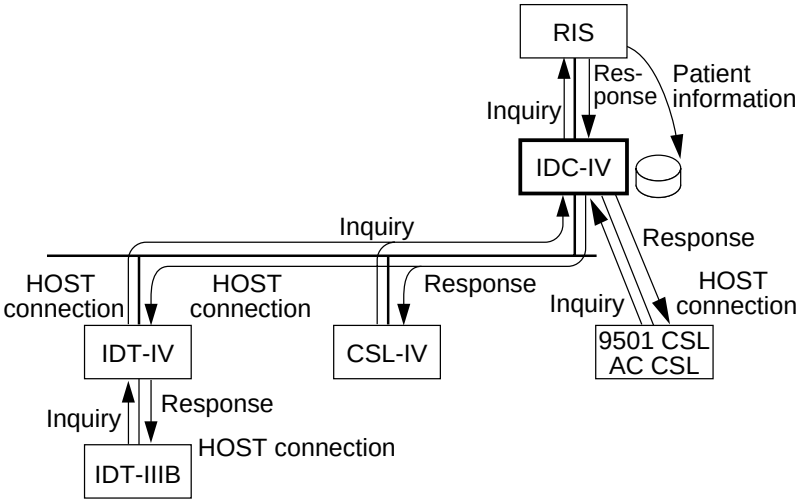
◆ ***NOTE*** ◆

Since the IDT-IV has only three serial connector channels, the possible connection configuration is limited when the IDT-IV is used as the HOST.

■ Type D

The patient information sent from the RIS is stored in the database on the local disk so as to respond to patient information inquiries from the networked units of the IDT-IV and connected 9501/AC CSL units. The IDC-IV is used as the HOST. The functions mentioned so far are the same as those of Type C.

When Type D is used, an inquiry is sent to the RIS if the requested patient information does not exist in the IDC-IV's patient information database. The patient information acquired from the RIS is not only stored in the IDC-IV's patient information database but also forwarded to the IDT/CSL that has requested the information.



4. Replacement Procedures

4.1 Top Cover Assembly

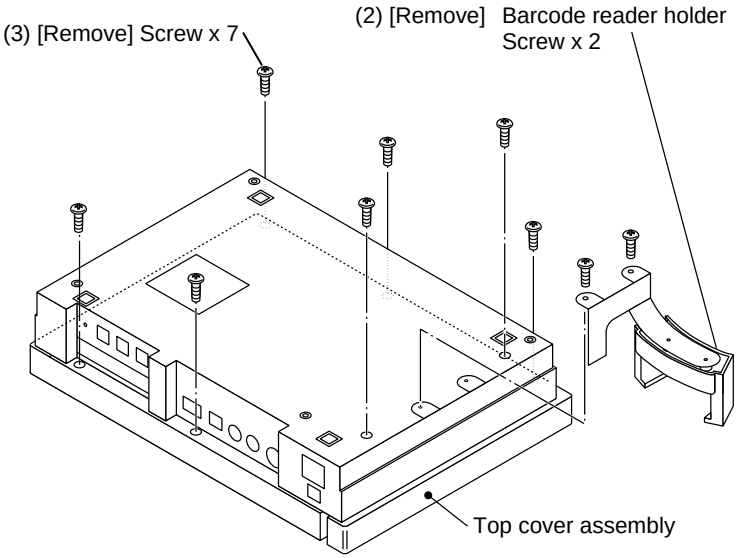
◆◆ CAUTIONS ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*

(1) Disconnect all cables from the equipment.

(2) Turn the equipment upside down and remove the barcode reader holder.

(3) Remove the seven screws from the top cover assembly.

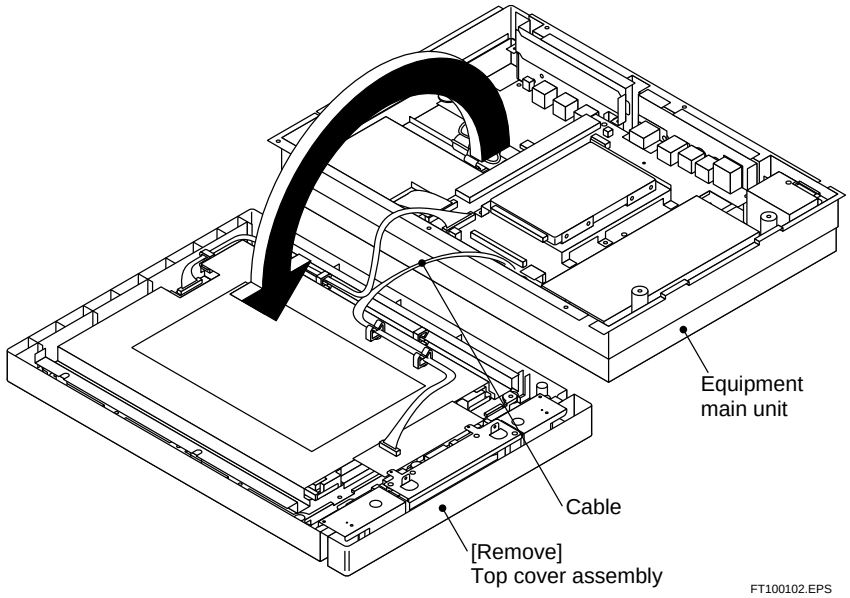


FT100101.EPS

(4) Turn the equipment back to its normal position and then remove the top cover assembly.

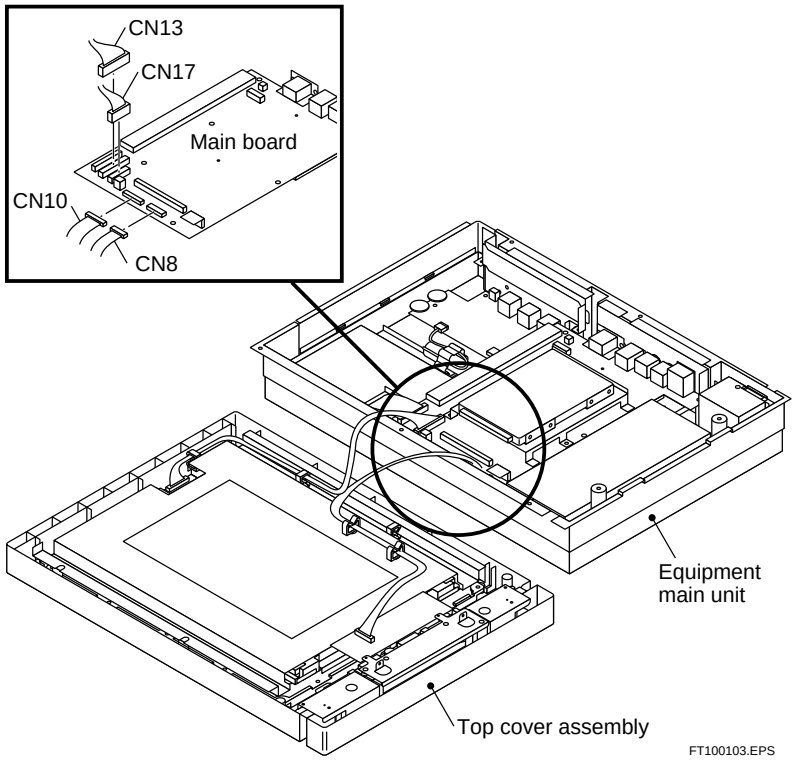
◆ NOTE◆

When removing the top cover assembly, do not apply any undue upward force to it. If you forcibly lift it upward, the cable connecting the top cover assembly to the main unit may break.



FT100102.EPS

(5) Disconnect the main board connectors (CN8, CN10, CN13, and CN17).



To accomplish installation, reverse the removal procedure.

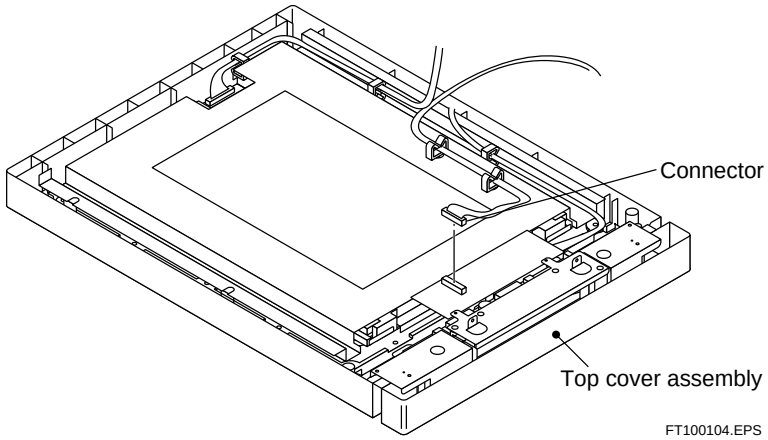
4.2 Touch Panel

◆◆ *CAUTIONS* ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*

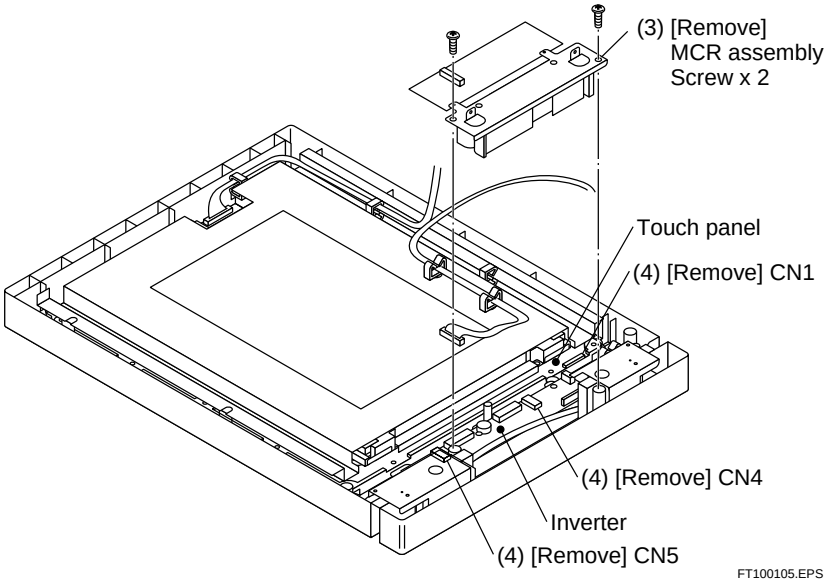
(1) Remove the top cover assembly.
☞ "4.1 Top Cover Assembly"

(2) Disconnect the MCR assembly connector.



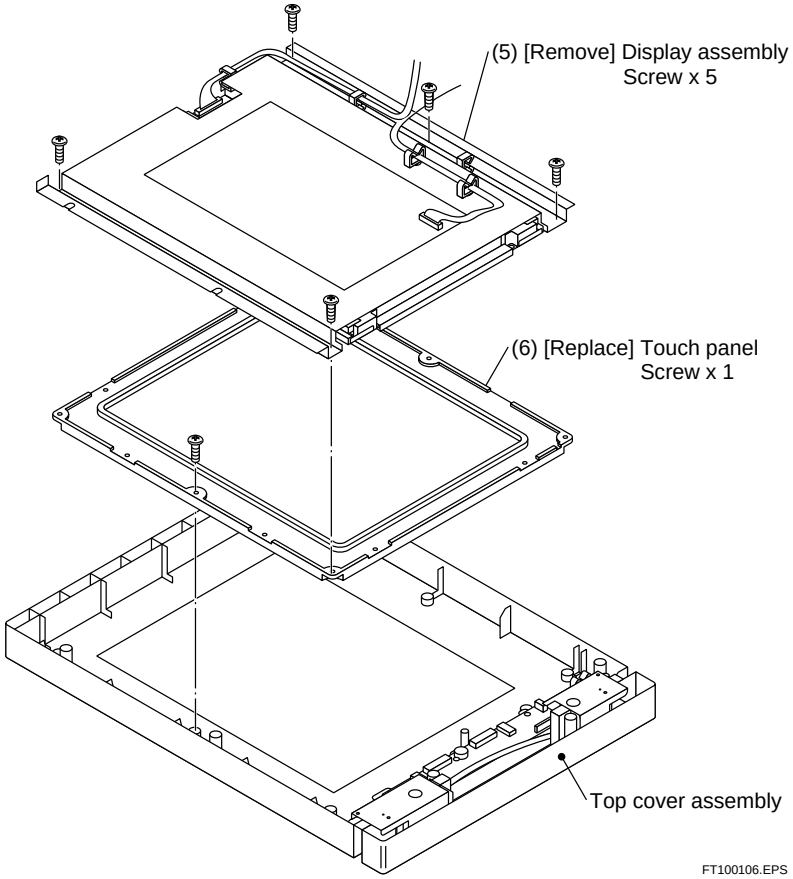
(3) Remove the MCR assembly.

(4) Disconnect the touch panel connector (CN1) and inverter connectors (CN4 and CN5).



(5) Remove the display assembly.

(6) Replace the touch panel.



To accomplish installation, reverse the removal procedure.

4.3 Power Supply Unit

◆◆ CAUTIONS ◆◆

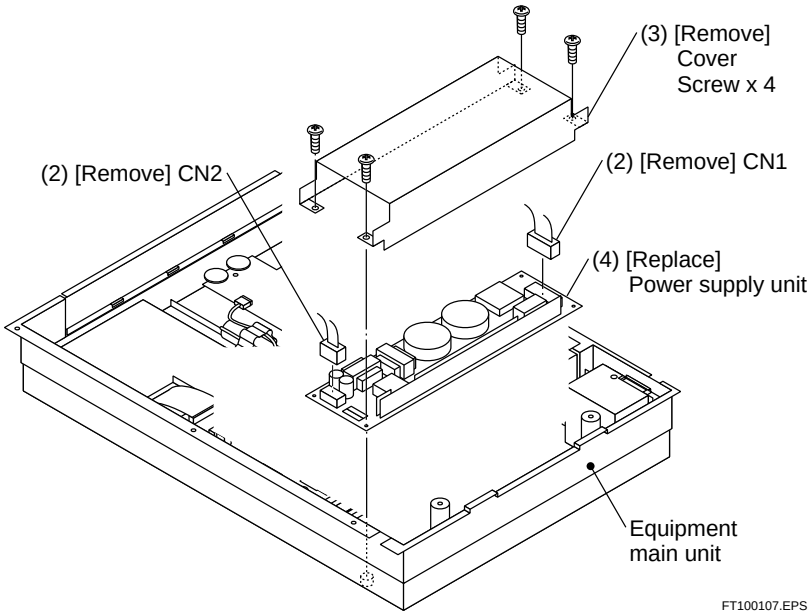
- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*

(1) Remove the top cover assembly.
☞ "4.1 Top Cover Assembly"

(2) Disconnect the power supply unit connectors (CN1 and CN2).

(3) Remove the power supply unit cover.

(4) Replace the power supply unit.



To accomplish installation, reverse the removal procedure.

4.4 Floppy Disk Drive

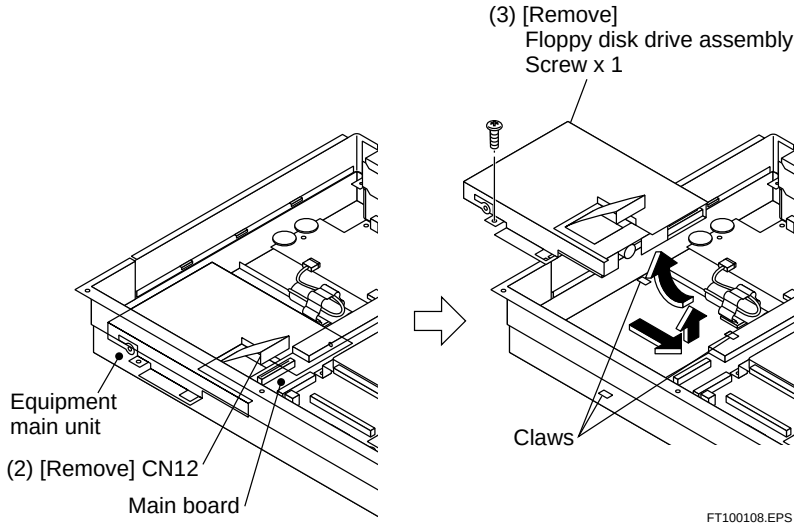
◆◆ CAUTIONS ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*

(1) Remove the top cover assembly.
☞ "4.1 Top Cover Assembly"

(2) Disconnect the main board connector (CN12).
If the option PC board (SIF04A board) is installed, remove it and the side cover.

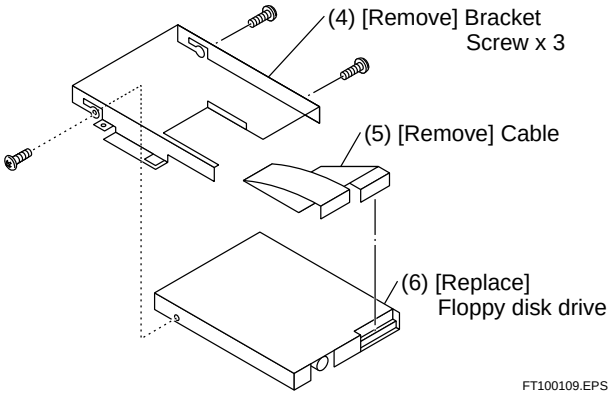
(3) Remove the floppy disk drive assembly.
Disengage the floppy disk drive assembly from the equipment main unit claws, and take it out while exercising care not to let it come into contact with the main board.



(4) Remove the bracket.

(5) Disconnect the cable.

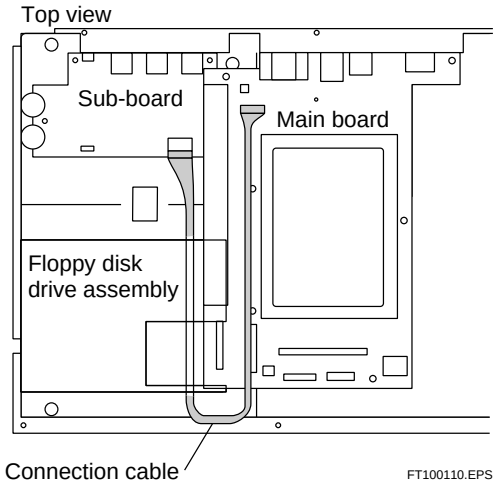
(6) Replace the floppy disk drive.



To accomplish installation, reverse the removal procedure.

◆ *NOTE* ◆

When installing the floppy disk drive assembly, ensure that the connection cable between the main board and sub-board is routed beneath the floppy disk drive assembly.



4.5 Hard Disk Drive

(1) Back up the whole data for the equipment.

☞ "2.1.5 Details of menu options, ■ Backup/restore"

◆◆ *CAUTIONS* ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*
- *Before replacement, be sure to back up the whole data for the equipment.*

(2) Remove the top cover assembly.

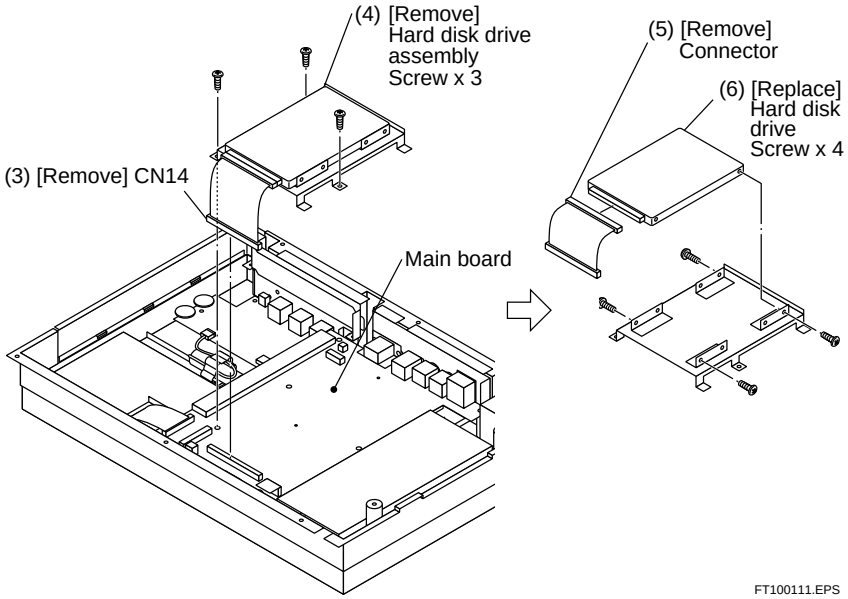
☞ "4.1 Top Cover Assembly"

(3) Disconnect the main board connector (CN14).

(4) Remove the hard disk drive assembly.

(5) Disconnect the hard disk drive connector.

(6) Replace the hard disk drive.



(7) Accomplish reassembly by reversing the removal steps.

(8) Install the optional software.
☞ "2.1.5 Details of menu options, ■ Software installation"

(9) Restore the data.
☞ "2.1.5 Details of menu options, ■ Backup/restore"

(10) Set up the system.
☞ "2.1.5 Details of menu options, ■ System setup"

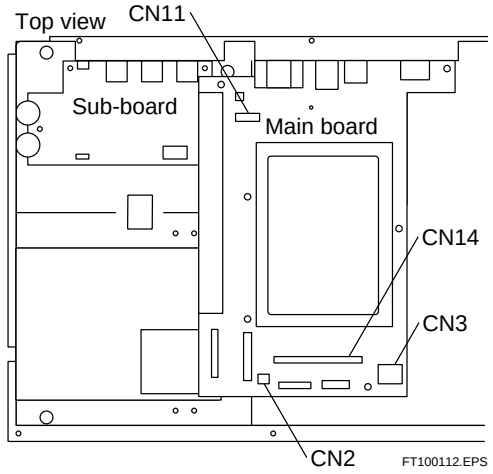
4.6 Main Board

◆◆ *CAUTIONS* ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*

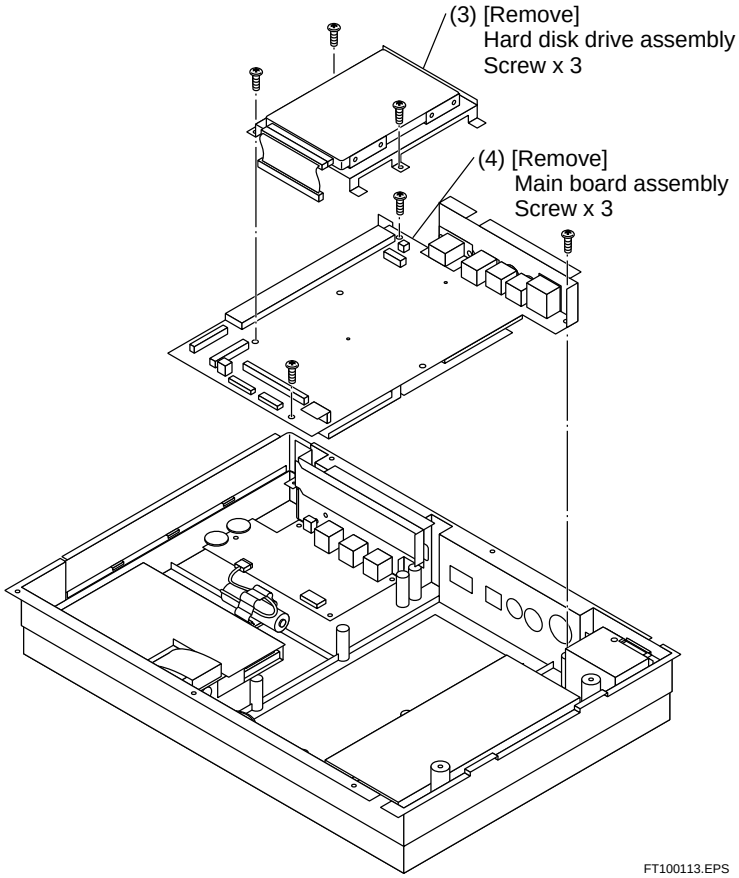
(1) Remove the top cover assembly.
☞ "4.1 Top Cover Assembly"

(2) Disconnect the main board connectors (CN2, CN3, CN11, and CN14).
If the option PC board (SIF04A board) is installed, remove it and the side cover.



(3) Remove the hard disk drive assembly.

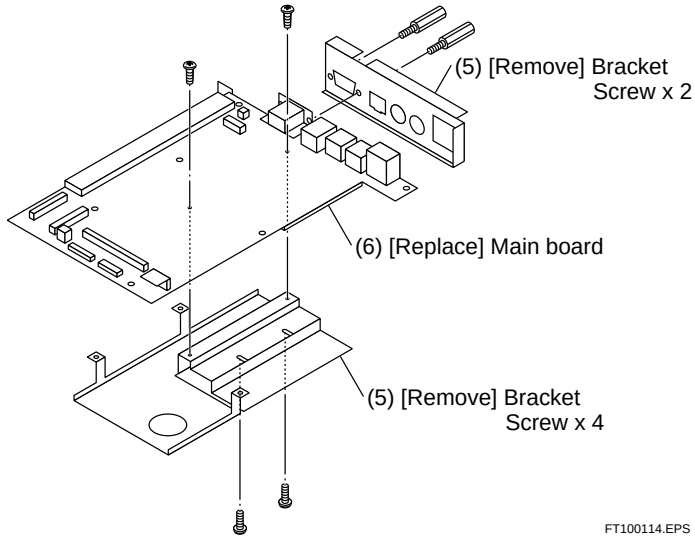
(4) Remove the main board assembly.



(5) Remove the two brackets.

(6) Replace the main board.

To accomplish installation, reverse the removal procedure.



the power cable from the equipment before performing the procedure below.

4.7 Sub-board

◆◆ CAUTIONS ◆◆

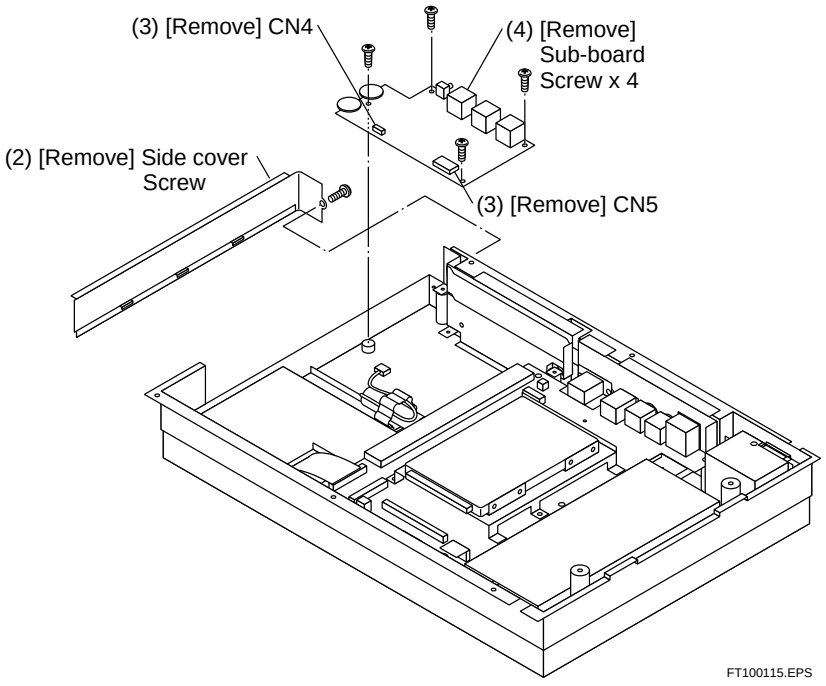
- *To avoid electrical shock hazards, turn OFF the power and disconnect*
- *When replacing parts, exercise care not to damage the cables.*

(1) Remove the top cover assembly.
☞ "4.1 Top Cover Assembly"

(2) Remove the side cover.
If the option PC board (SIF04A board) is installed, remove it.

(3) Disconnect the sub-board connectors (CN4 and CN5).

(4) Remove the sub-board.



(5) Accomplish installation by reversing the removal procedure.

(6) Set the date and time.
☞ Installation, "3.3.6, Setting the system, ■ Setting the date and time"

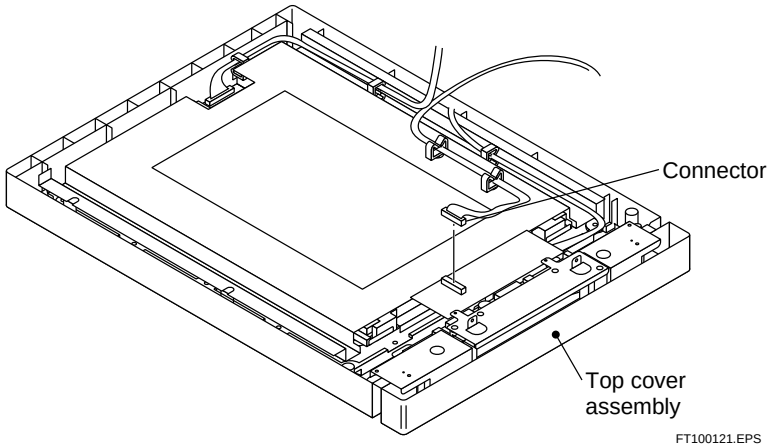
4.8 LCD

◆◆ CAUTIONS ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*

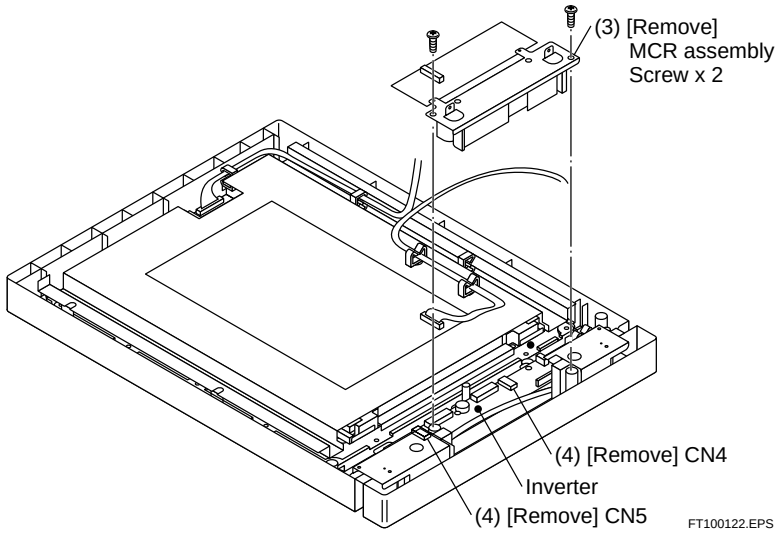
(1) Remove the top cover assembly.
☞ "4.1 Top Cover Assembly"

(2) Disconnect the MCR assembly connector.

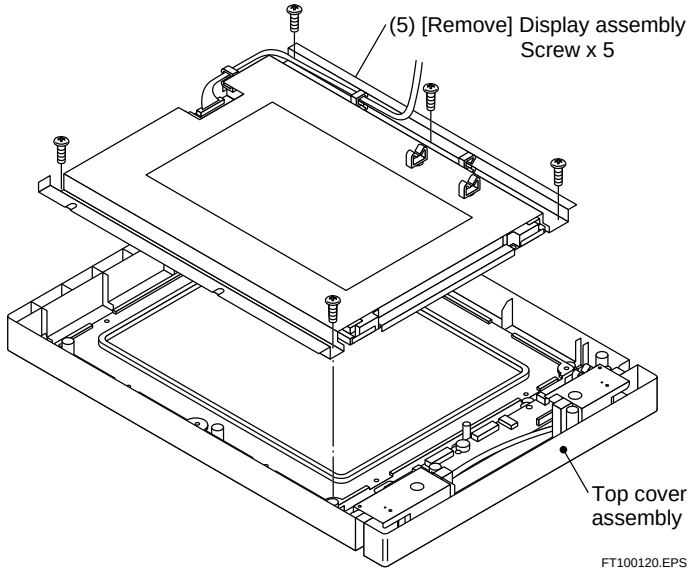


(3) Remove the MCR assembly.

(4) Disconnect the inverter connectors (CN4 and CN5).



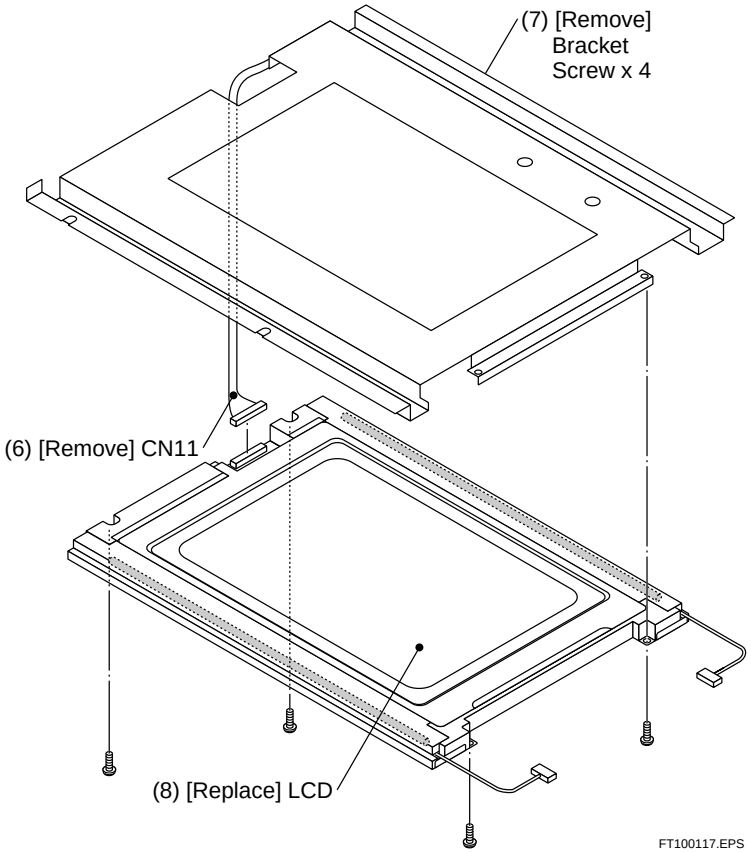
(5) Remove the display assembly.



(6) Disconnect the LCD connector (CN11).

(7) Remove the bracket.

(8) Replace the LCD.



4.9 Backup Battery

◆◆ *CAUTIONS* ◆◆

- *To avoid electrical shock hazards, turn OFF the power and disconnect the power cable from the equipment before performing the procedure below.*
- *When replacing parts, exercise care not to damage the cables.*
- *When setting the backup battery, properly orient it. If it is reversely oriented, it may burst.*
- *For backup battery replacement, use the battery prescribed in the parts list.*
- *When disposing of a used backup battery, comply with the manufacturer instructions.*

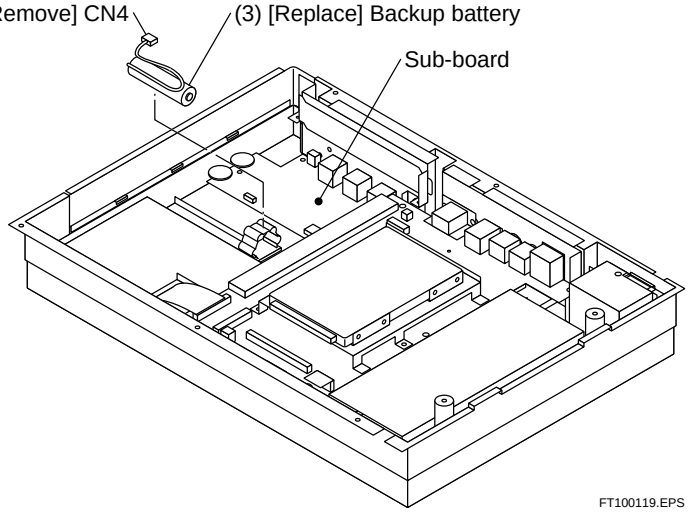
(1) Remove the top cover assembly.

☞ "4.1 Top Cover Assembly"

(2) Disconnect the sub-board connector (CN4).

If the option PC board (SIF04A board) is installed, remove it and the side cover.

(3) Replace the backup battery.



(4) Accomplish reassembly by reversing the removal steps.

(5) Set the date and time.

☞ Installation, "3.3.6, Setting the system, ■ Setting the date and time"

5. Service Parts List

How to Use Service Parts List

■ RANK

❍ Parts handling ID symbols used to identify the parts requiring special operation

The ID symbols are assigned to applicable parts. Parts without the R mark are replaced and handled in a regular manner.

Symbol	Description
R	Repairable parts
Q, T	Symbol for overseas use only

❍ Export regulation mark

This + mark is assigned to the parts subject to Export regulations. Parts without the + mark are not subject to Export regulations.

Symbol	Description
+	Parts subject to Export regulations

❍ Fault rankings used for estimating the recommended stock quality

All parts are assigned a symbol letter from A to E.

Symbol	Description
A	Consumable parts or parts that will be replaced at short intervals
B	Parts that may become faulty accidentally and have a relatively high failure rate
C	Parts that have a sufficiently long MTBF, but are expected to have a high failure rate
D	Parts that have a sufficiently long MTBF, but are expected to become faulty
E	Parts that are necessary for fault analysis or parts that may be needed in case of faults such as man-induced damage

❍ RANK column description

The symbols for Fault Ranking, Parts Handling, and Export regulation are assigned in order named. Thus, one to three letters are put in the RANK column.

■ REF. NO.

A number for indicating each part in the Service Parts Exploded Views.

■ PART NUMBER

A code number that is unique to each part. The rightmost letter of the code number has the following meaning.

❍ For hardware

The letter denotes the version number of a part. If parts have different version numbers, they are upward-compatible.

❍ For software

The letter denotes the software specifications.

■ PART NAME

This represents the general name of a part.

■ QTY.

QTY. represents the quantity of parts used in a unit or assembly.

■ REMARKS

Unique name of a part or its relevant information or note is described in this column.

■ SERIAL NUMBER

The units may contain different parts depending on their shipment control number. SERIAL NUMBER indicates the shipment control number to which the parts are applicable. If this column is blank, the parts are applicable to all the relevant units.

■ Recommended quantity of spare parts

It is recommended as a rough guide to hold in stock a specified quantity of parts according to the rank (A to E) assigned to the parts. Parts to be replaced at periodic intervals must be held in stock separately.

Adjust the quantity of parts stock depending on the number of working units (N) as prescribed below.

Q: Quantity used in a single system

❍ N = 1

Rank A = 1 + Q x 0.3
Rank C = 1 + Q x 0.05
Rank D = 1 + Q x 0.02

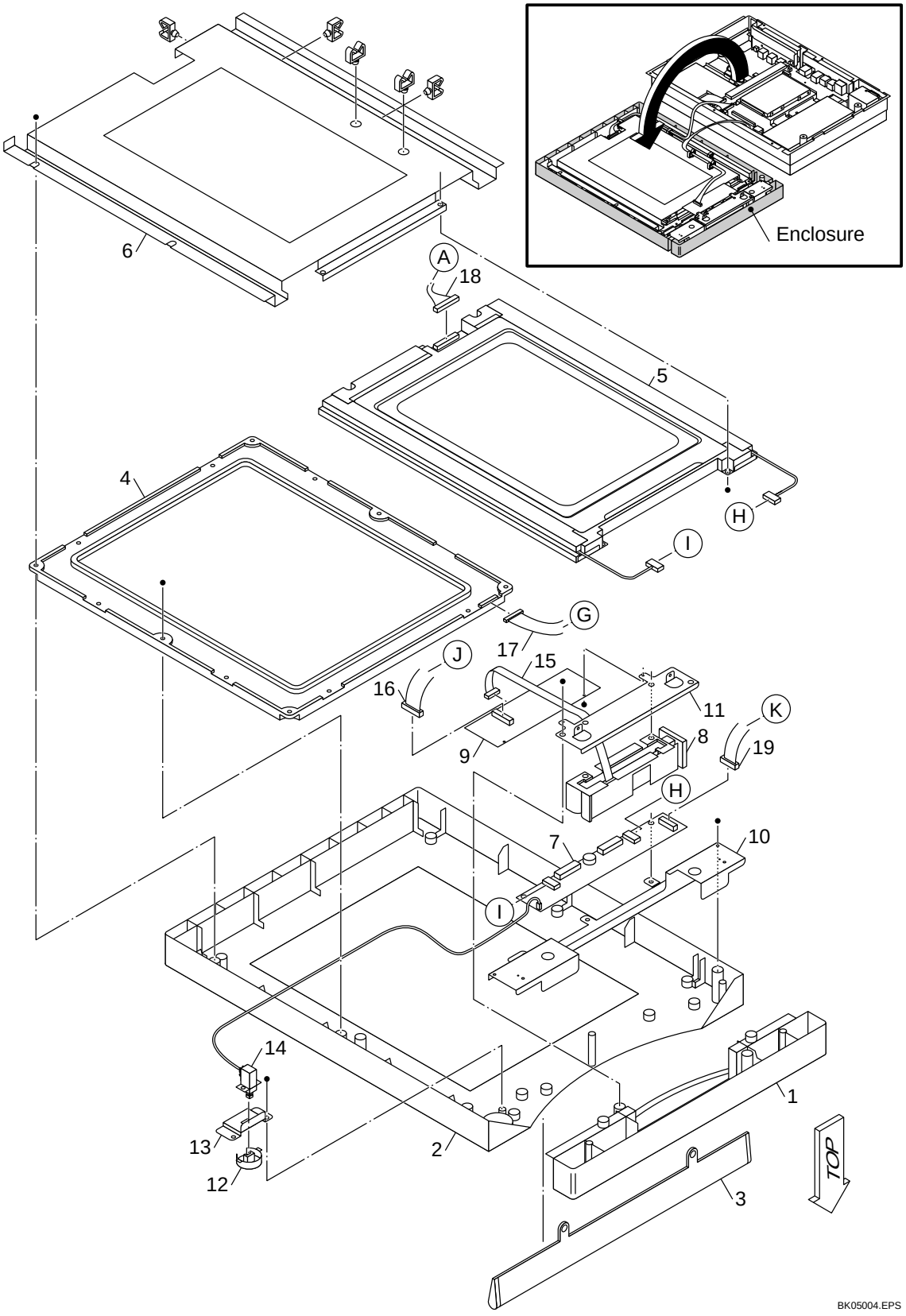
❍ $2 \leq N \leq 10$

Rank A = 2 + N x Q x 0.3
Rank C = 2 + N x Q x 0.05
Rank D = 1 + N x Q x 0.02

❍ $11 \leq N \leq 300$

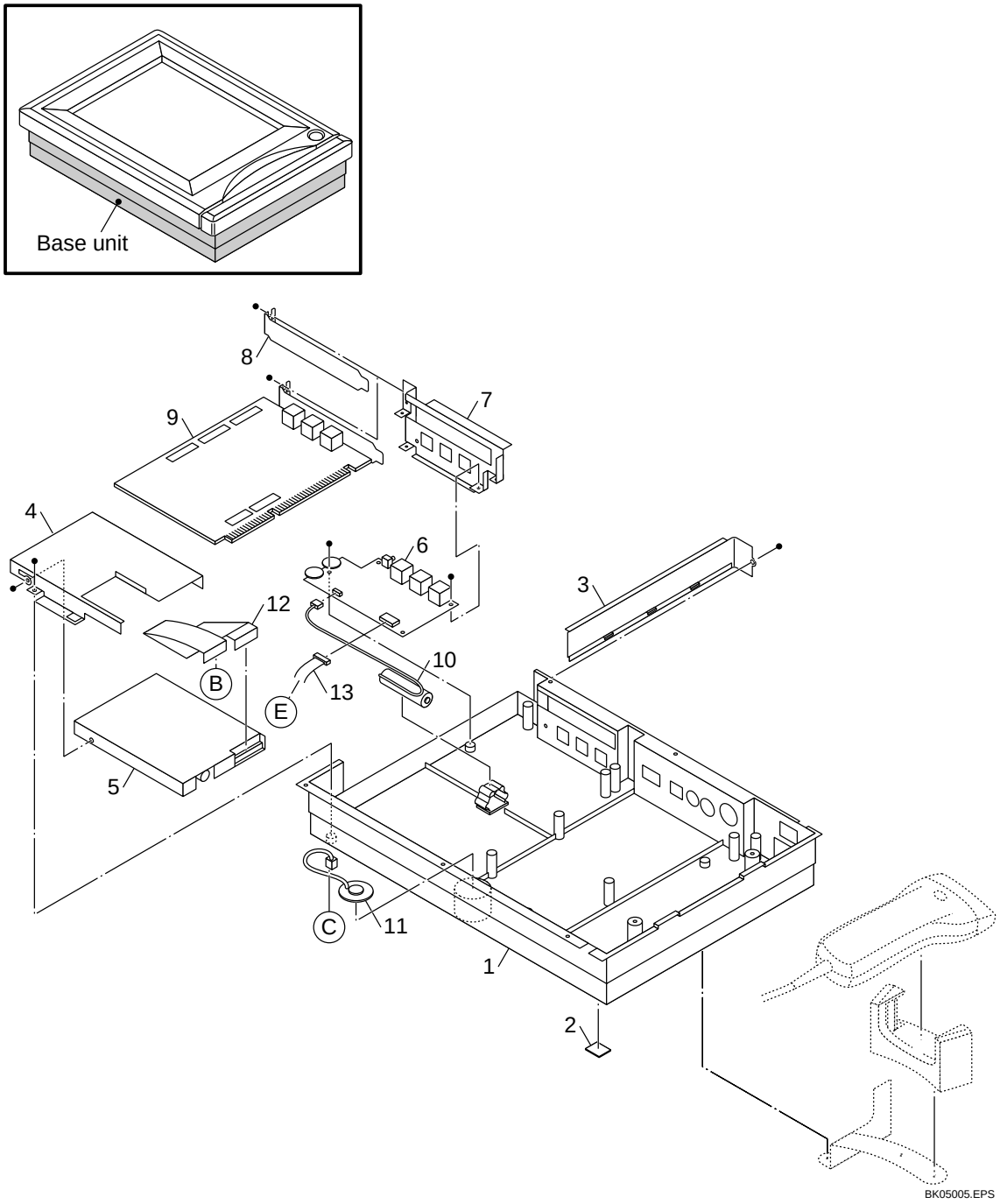
Rank A = 3 + N x Q x 0.3
Rank C = 3 + N x Q x 0.05
Rank D = 2 + N x Q x 0.02

5.1 Enclosure Section



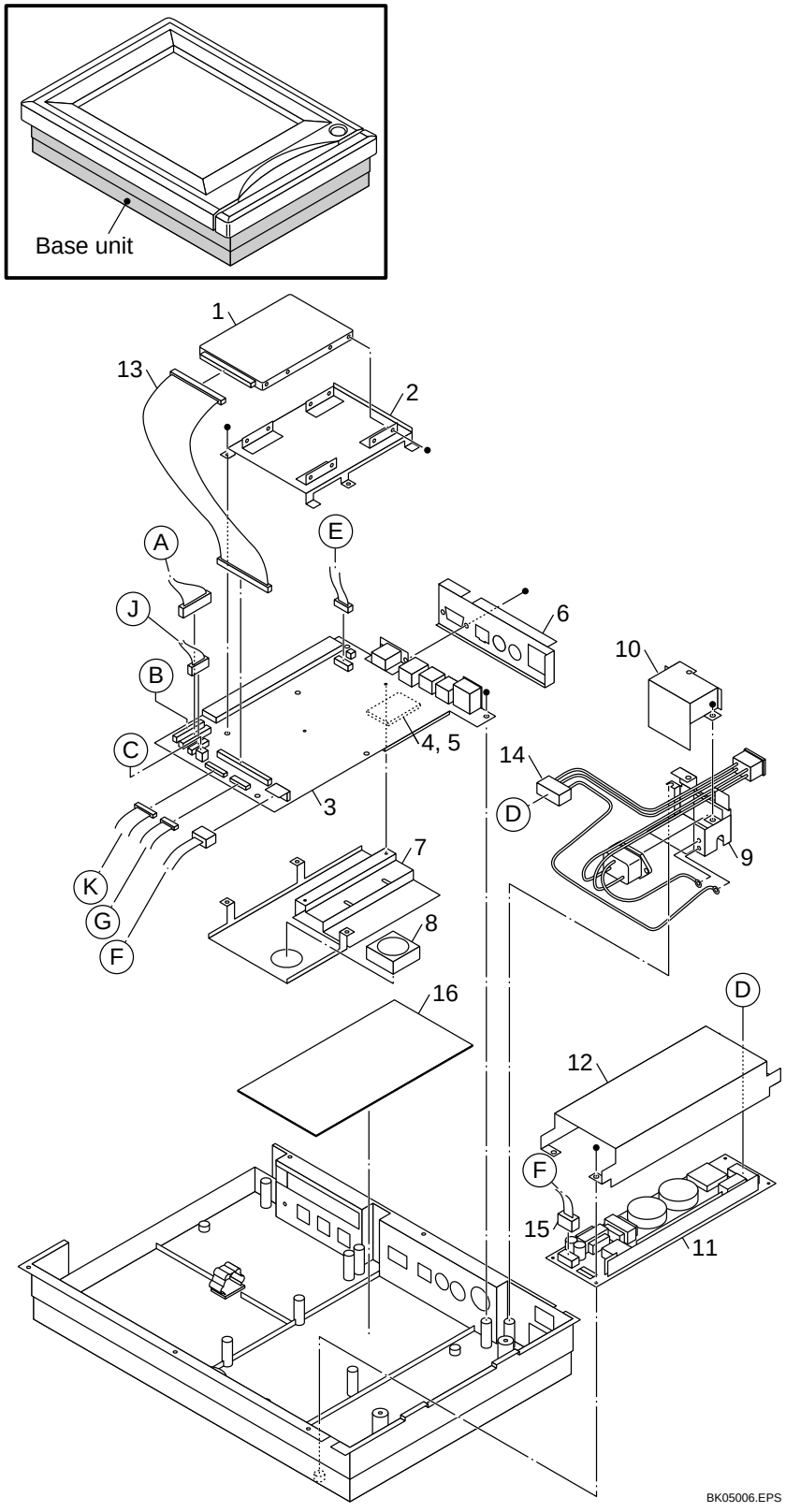
RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
D	1	350Y1211	Cover	1	PA01267-K030 Lens-deposited	
D	2	350N2027	Cover	1	PA01267-K032	
D	3	350N2028	Cover	1	PA01267-K034	
C	4	845N7000	Panel	1	PA01267-K014 Touch panel	
C	5	849N7000	Display assembly	1	PA01267-K012	
D	6	356N5997	Bracket	1	PA01267-K043	
C	7	113Y7078	PC board	1	PA01267-K013 Inverter	
C	8.1	852N7001	Magnetic card reader (reader unit)	1	PA01267-K015 ISO card reader	
	8.2	852N7002		1	PA01267-K016 JIS card reader	
C	9	113Y7079	PC board	1	PA01267-K017 Magnetic card reader I/F board	
D	10	356N5996	Bracket	1	PA01267-K042	
D	11	356N5999	Bracket	1	PA01267-K045	
C	12	340N0151	Key-top	1	PA01267-K033	
D	13	356N5998	Bracket	1	PA01267-K044	
E	14	136N7015	Cable	1	PA01267-K025 Power switch attached	
E	15	136N7013	Cable	1	PA01267-K023 MCR-to-interface board connection	
E	16	136N7014	Cable	1	PA01267-K024 Interface board-to-main board connection	
E	17	136N7018	Cable	1	PA01267-K028 Touch panel-to-main board connection	
E	18	136N7017	Cable	1	PA01267-K027 LCD-to-main board connection	
E	19	136N7016	Cable	1	PA01267-K026 Inverter-to-main board connection	

5.2 Base Section - Floppy Disk Drive and Sub-board



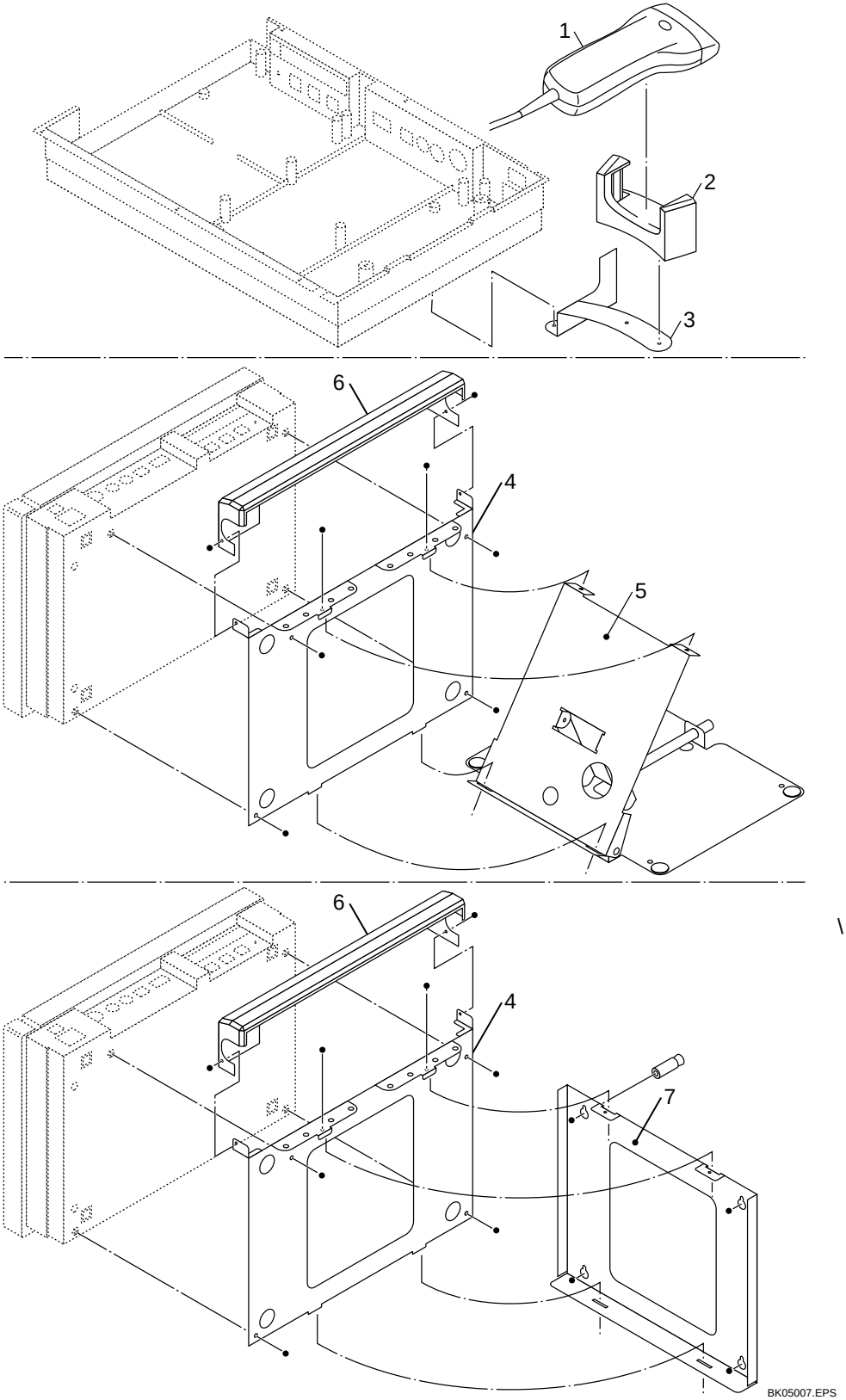
RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
D	1	360Y0073	Case	1	PA01267-K029 Rubber feet, batter holder, and gasket attached	
D	2	367N2060	Foot	4	PA01267-K035	
D	3	350N2026	Cover	1	PA01267-K031	
D	4	356N5993	Bracket	1	PA01267-K039	
D	5	850N7001	Floppy disk drive	1	PA01267-K003	
C	6	113Y7077	PC board	1	PA01267-K002 Sub-board	
D	7	356N5991	Bracket	1	PA01267-K037	
D	8	352N0390	Panel	1	PA01267-K046	
CR	9	113Y7071H	SIF04A Board	1		
C	10	125N7001	Battery	1	PA01267-K009 Backup lithium battery	
D	11	121N7000	Speaker	1	PA01267-K011	
E	12	136N7008	Cable	1	PA01267-K018 Floppy disk drive connection	
E	13	136N7012	Cable	1	PA01267-K022 Main board-to-sub-board connection	

5.3 Base Section - Hard Disk Drive, Main Board, and Power Supply



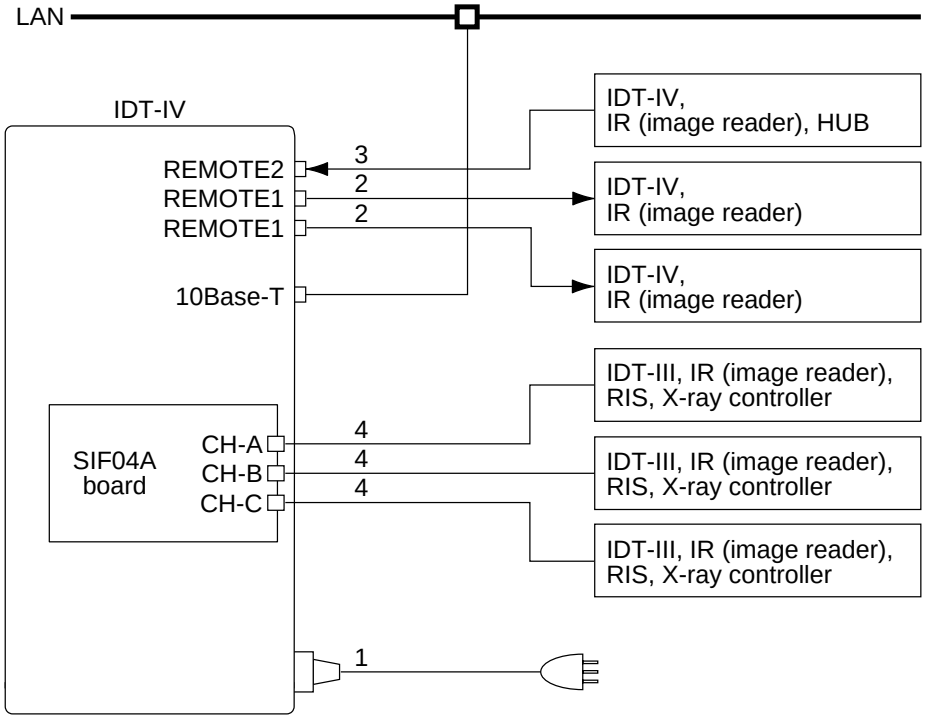
RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
D	1.1	114Y5441001A	Hard disk drive	1	Japanese OS and Japanese application software included	
	1.2	114Y5441001B		1	English OS and English application software included	
D	2	356N5992A	Bracket	1	PA01267-K065	
C	3.1	113Y7076	PC board	1	PA01267-K001 Main board (for 100MHz)	
	3.2	113Y1415		1	PA01267-K060 Main board (for 166MHz)	
D	4.1	102N7000	IC	1	PA01267-K006 CPU card (486DX4-100MHz)	
	4.2	102N0068		1	PA01267-K061 CPU card (Pentium II 166MHz)	
D	5.1	102N7001	IC	1	PA01267-K007 32MB add-on DIMM (486DX4-100MHz)	
	5.2	102N0069		1	PA01267-K062 64MB DIMM	
D	6	356N5990	Bracket	1	PA01267-K036	
D	7.1	379N0085	Heat sink	1	PA01267-K048 486DX4-100MHz	
	7.2	379N0096		1	PA01267-K063 Pentium II - for 166MHz	
	7.3	139N0058	Heat discharging rubber	1	PA01267-K064 Pentium II - for 166MHz	
D	8	119N0700	Motor Fan	1	PA01267-K010	
D	9	356N5994	Bracket	1	PA01267-K040	
D	10	356N5995	Bracket	1	PA01267-K041	
C	11	125N7000	Power Supply	1	PA01267-K008	
D	12	356N6000	Bracket	1	PA01267-K047	
E	13	136N7009A	Cable	1	PA01267-K019 Hard disk drive connection	
E	14	136N7010	Cable	1	PA01267-K020 Main switch and inlet attached	
E	15	136N7011	Cable	1	PA01267-K021 Power supply-to-main board connection	
D	16	379N0089	Radiating sheet	1	PA01267-K049	
E	17	136Y7135	Cable	1	SIF04A-to-main board connection for remote	

5.4 Accessories



RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
C	1	852N7003	Barcode reader (reader unit)	1	PA01267-K005 Barcode reader	
D	2	362N0477	BCR support	1	PA01267-K050	
D	3	356N6001	Bracket	1	PA01267-K051 For BCR holder	
C	4	346N0983A	Plate Support	1	Stand/wall-mounting bracket	
C	5	357Y0154	Base	1	Stand	
C	6	350N2025A	Cover	1	Stand/wall-mounting bracket	
C	7	346N0982A	Plate Support	1	Wall-mounting bracket	

5.5 Cables



Note: Remote 1 ····· Remote power control output (2CH)
Remote 2 ····· Remote power control output (1CH)

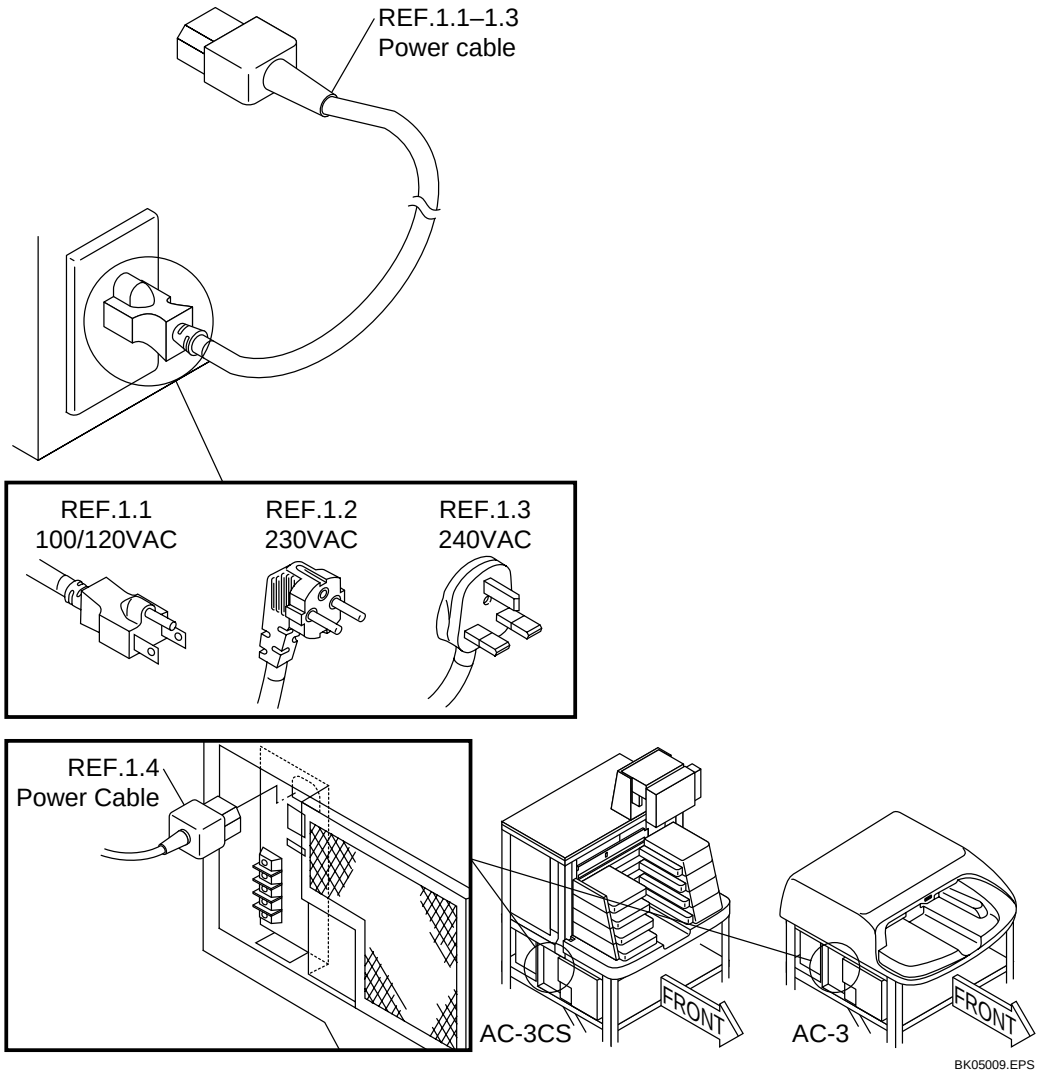
BK05008.EPS

RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
E	1.1	136N0141	Power Cable	1	100/120 VAC, VD-01 (Japan, U.S.)	
	1.2	136N0142		1	230 VAC, VD-02 (Germany, France, Italy, Spain, Sweden, Finland, Denmark)	
	1.3	136N0143		1	240 VAC, VD-03 (U.K.)	
	1.4	136N0147		1	AC-3/AC-3 CS CSL 100-VAC power cable	
E	2.1	136Y7119	Cable	1	VJ-01, 5 m, IDT-IV-to-IDT-IV	
		136Y7120		1	VJ-02, 15 m, IDT-IV-to-IDT-IV	
		136Y7121		1	VJ-03, 30 m, IDT-IV-to-IDT-IV	
		136Y7122		1	VJ-04, 50 m, IDT-IV-to-IDT-IV	
		136Y7123		1	VJ-05, 100 m, IDT-IV-to-IDT-IV	
	2.2	136Y6542	Cable	1	VJ-06, 5 m, IDT-IV-to-IDT-IV, USA Spec.	
		136Y6543		1	VJ-07, 15 m, IDT-IV-to-IDT-IV, USA Spec.	
		136Y6544		1	VJ-08, 30 m, IDT-IV-to-IDT-IV, USA Spec.	
		136Y6545		1	VJ-09, 50 m, IDT-IV-to-IDT-IV, USA Spec.	
		136Y6546		1	VJ-10, 100 m, IDT-IV-to-IDT-IV, USA Spec.	
	2.3	136Y7137A	Cable	1	VM-01, 5 m, IDT-IV-to-DPR/SPR (IDT-IV master)	
		136Y7138A		1	VM-02, 15 m, IDT-IV-to-DPR/SPR (IDT-IV master)	
		136Y7139A		1	VM-03, 30 m, IDT-IV-to-DPR/SPR (IDT-IV master)	
		136Y7140A		1	VM-04, 50 m, IDT-IV-to-DPR/SPR (IDT-IV master)	
		136Y7141A		1	VM-05, 100 m, IDT-IV-to-DPR/SPR (IDT-IV master)	

RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
E	3.1	136Y7124A	Cable	1	VK-01, 5 m, IDT-IV-to-DPR/SPR (DPR/SPR master)	
		136Y7125A		1	VK-02, 15 m, IDT-IV-to-DPR/SPR (DPR/SPR master)	
		136Y7126A		1	VK-03, 30 m, IDT-IV-to-DPR/SPR (DPR/SPR master)	
		136Y7127A		1	VK-04, 50 m, IDT-IV-to-DPR/SPR (DPR/SPR master)	
		136Y7128A		1	VK-05, 100 m, IDT-IV-to-DPR/SPR (DPR/SPR master)	
	3.2	136Y7129	Cable	1	VL-01, 5 m, IDT-IV-to-HUB	
		136Y7130		1	VL-02, 15 m, IDT-IV-to-HUB	
		136Y7131		1	VL-03, 30 m, IDT-IV-to-HUB	
		136Y7132		1	VL-04, 50 m, IDT-IV-to-HUB	
		136Y7133		1	VL-05, 100 m, IDT-IV-to-HUB	
	3.3	136Y7135	Cable	1	Remote power supply shutoff signal contact	
E	4.1	136Y5761	Cable	1	IDT-IV-to-RIS/X-ray, OP-09/VH-01, RIS terminal, X-ray apparatus connection, 3 m (25-pin D-sub)	
		136Y5522		1	IDT-IV-to-RIS/X-ray, OP-09/VH-02, RIS terminal, X-ray apparatus connection, 5 m (25-pin D-sub)	
		136Y5523		1	IDT-IV-to-RIS/X-ray, OP-09/VH-03, RIS terminal, X-ray apparatus connection, 10 m (25-pin D sub)	
		136Y5524		1	IDT-IV-to-RIS/X-ray, OP-09/VH-04, RIS terminal, X-ray apparatus connection, 15 m (25-pin D sub)	
		136Y5757		1	IDT-IV-to-RIS, OP-09/VH-05, RIS terminal, 3 m (9-pin D sub)	
		136Y5758		1	IDT-IV-to-RIS, OP-09/VH-06, RIS terminal, 5 m (9-pin D sub)	
		136Y5759		1	IDT-IV-to-RIS, OP-09/VH-07, RIS terminal, 10 m (9-pin D sub)	
		136Y5760		1	IDT-IV-to-RIS, OP-09/VH-08, RIS terminal, 15 m (9-pin D sub)	

RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
E	4.2	136Y4832A	Cable	1	VF-01, 5 m, IDT-IV-to-IR	
		136Y4761A		1	VF-02, 15 m, IDT-IV-to-IR	
		136Y4762A		1	VF-03, 30 m, IDT-IV-to-IR	
		136Y4763A		1	VF-04, 50 m, IDT-IV-to-IR	
		136Y4764A		1	VF-05, 100 m, IDT-IV-to-IR	
	4.3	136Y4843A	Cable	1	VG-01, 5 m, IDT-IV-to-IDT-III	
		136Y4756A		1	VG-02, 15 m, IDT-IV-to-IDT-III	
		136Y4757A		1	VG-03, 30 m, IDT-IV-to-IDT-III	
		136Y4758A		1	VG-04, 50 m, IDT-IV-to-IDT-III	
		136Y4759A		1	VG-05, 100 m, IDT-IV-to-IDT-III	
		136Y4760A		1	VG-06, 150 m, IDT-IV-to-IDT-III	
		136Y4844A		1	VG-07, 200 m, IDT-IV-to-IDT-III	
		136Y4845A		1	VG-08, 250 m, IDT-IV-to-IDT-III	
		136Y4846A		1	VG-09, 300 m, IDT-IV-to-IDT-III	
C	5	301N0005A	Cross-recessed head machine screw	1~3*	For grounding the remote power cables	

* Quantity depends on the number of cables connected.



FCR ID Terminal/Console

ID-T741 Service Manual

INSTALLATION

Control Sheet

Issue date	Revision number	Reason	Pages affected
04/10/98	00	New release	All pages
12/20/98	01	Revision (FM2370)	All pages
02/20/99	02	Revision (FM2434)	Pages 00, 0.1, 1~3, 5, 10, 11, 16, 22, 24~64
03/30/99	02	Revision (FM2483)	Pages 00, 32, 37
09/24/99	03	Revision (FM2561)	Pages 0, 00, 0.1, 13, 14, 15, 17, 36~38,41, 43~52, 54, 57, 58, 60, 61, 62, 70~83
09/24/99	03	Changes in pagination (FM2561)	Pages 53, 55, 56, 59, 63~69
03/30/2000	04	Revision for software version B08 (FM2762)	Pages 0, 00, 24, 36, 44, 45, 61

INSTALLATION

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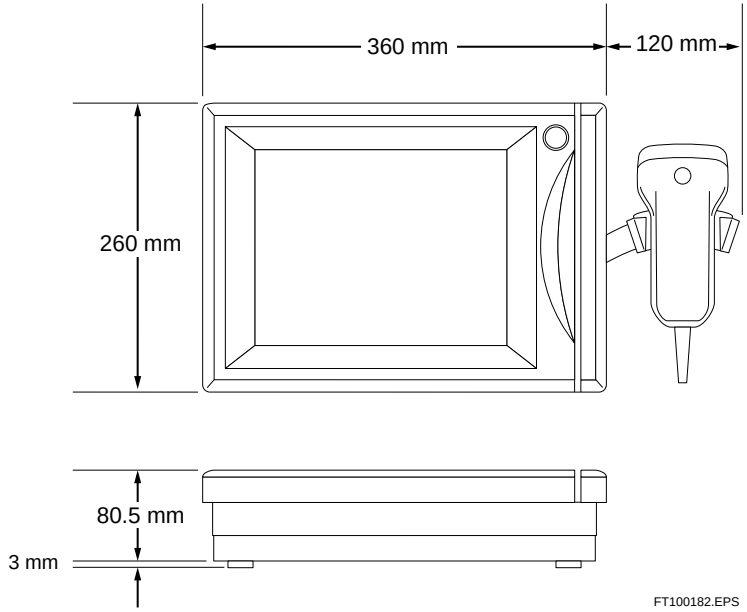
1. Installation Conditions

1.1 Dimensions and Weight

Equipment dimensions and weight are as follows.

■ Dimensions

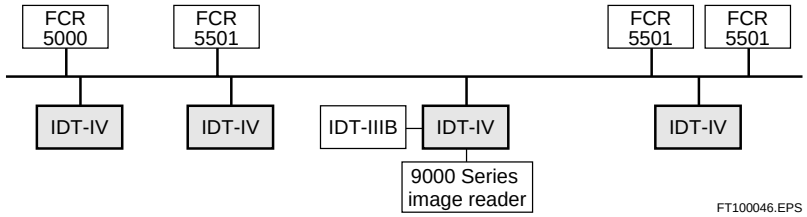


■ Weight

5 kg or less (barcode reader included)

1.2 System Configuration

Following is a sample configuration of how the system is connected.



1.3 Environmental Conditions

Equipment environment conditions are as follows.

	Operating	Non-operating	Transit/storage
Temperature	10 to 35°C	0 to 45°C	–10 to +50°C
Relative humidity (with no dew condensation)	20 to 80%	90% or less	

TT100004.EPS

1.4 Power Requirements

Equipment power requirements are as follows.

- Power frequency — 50 Hz/60 Hz.
- Input voltage — 100 to 240 VAC ±10% (single-phase).
- Power cable — 2.5 m (standard). Connected into a wall outlet.
- Rated current — 0.5 A for 100-120 VAC. 0.3 A for 200-240 VAC.
- Overload protection — Provided (automatic reset type incorporated). Causes the machine to shut down when a 125% condition continues for 30 seconds and achieves recovery 30 seconds later.
- Power consumption — 30W or less.

2. Installing the Machine

After unpacking, check the supplied items against the packing list contained in the carton.

2.1 Tools Used

Name	Qty.	Model	Recommended manufacturer	Remarks
Phillips screwdriver No. 1	1	No. 6300 -1	VESSEL	
Phillips screwdriver No. 2	1	No. 6300 -2	VESSEL	
Keyboard	1			

TT100003.EPS

2.2 System Configuration and Connection

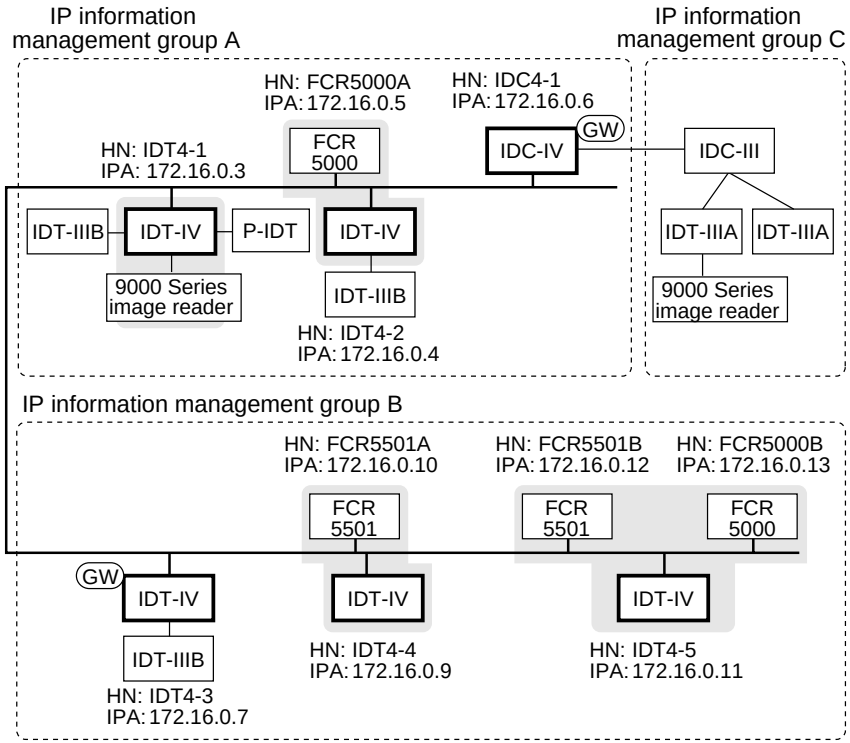
Discuss with the hospital's network administrator and prepare the system configuration diagram and device connection table. In doing so, decide which device will be the master.

Master IDT : The IDT-IV or IDC-IV that will control date and time or HOST information.
Make sure to set one unit in the network as the master. Of all the IDT-IV and IDC-IV units, the master should be the device that is operated the longest.

Slave IDT : All IDT-IV and IDC-IV units except the master IDT.

■ System configuration diagram

A typical system configuration is shown below.



HN: Host name IPA: IP address

IP information management group range

Image readers whose image processing parameters are managed by the IDT-IV

GW Device that functions as the IP information gateway

FT100001.EPS

Concerning groups (IP information management group) and gateways (IP information gateway), see Maintenance," 3.4.3 IP registration information management/sharing function."

■ Device connection table

Device connection examples for network connection and serial connection are tabulated below.

● For network connection

Device connection table

Group name	IP address	Host name	Device ID
Group-A	172.16.0.3	IDT4-1	IDT4
Group-A	172.16.0.4	IDT4-2	IDT4
	172.16.0.5	FCR5000A	5000
Group-A	172.16.0.6	IDC4-1	IDC4
Group-B	172.16.0.7	IDT4-3	IDT4
Group-B	172.16.0.9	IDT4-4	IDT4
	172.16.0.10	FCR5501A	5501
Group-B	172.16.0.11	IDT4-5	IDT4
	172.16.0.12	FCR5501B	5501
	172.16.0.13	FCR5000B	5000

FT100005.EPS

● For serial connection

Device connection table IDT-IV-1

Serial channel number	Connected device	Interface type	Cable length	Connected device setup number
1	9000C	RS-422	50 m	2
2	IDT-IIIB	RS-422	15 m	1

FT100004.EPS

2.3 Unpacking

To avoid dew condensation on the equipment during wintertime, leave the machine in the packed condition at room temperature for sufficient time before proceeding to unpack it.

2.4 Checking the Items Supplied

The tables below list the standard items and options.

List of standard items

Name	Product abbreviation	Qty.	Remarks
ID-T741* (See Note below.)	IDT 741[A] WITHOUT MCR E	1	Mag. card reader is not inluced.
	IDT 741[A] ISO E		ISO type Mag. card reader
	IDT 741[A] JIS E		JIS (Japanese Industry Standard) type Mag. card reader
Instruction manual		1	
MCR label		2	
Windows NT license label		1	Must be stored to avoid its loss.
Floppy disk containing European language messages		1	For overseas countries except for the USA

Note: (1) Power cable is not included.
(2) The character A (IDT 741A ...) represents the new version of CPU used in IDT 741 controller. In addition, “IDT 741A ...” does not include the BCR (Barcode reader). Order separately as “IDT 741 BARCODE E”, if necessary.

TT100001.EPS

List of options (1/2)

Name	Product abbreviation	Qty.	Remarks
Full-sized keyboard	IDT 741 K/B ** E (**: GER, FR, IT, SP, SWD)	1	English/German/French/ Italian/Spanish/Swedish
SIF04A board kit	IDT-4 I/F KIT E	1	
Barcode reader kit	IDT 741 BARCODE E	1	
Stand kit	IDT 741 STAND E	1	
Wall-mounting kit	IDT 741 BRACKET E	1	Wall-mounting bracket
Patient information on-line software floppy disk	ID ONLINE SOFT FOR IDT4 V01 E	1	
X-ray apparatus on-line software floppy disk	X ONLINE SOFT FOR IDT4 V01 E	1	

TT100005.EPS

List of options (2/2)

Name		Product abbreviation	Qty.	Remarks
Signal cables	IDT-to-IR serial cable	IF CABLE 317-741 ∗M E	1	5, 15, 30, 50, or 100 m. Same as the IDT-III-to-9000 connection cables.
	IDT-IV-to-IDT-III serial cable	IDT-4 IF CABLE ∗M E	1	5, 15, 30, 50, 100, 150, 200, 250, or 300 m. Same as the IDT-III-to-IDT-III connection cables
	IDT-to-RIS/X-ray apparatus RS232C 25-pin D-sub cross cable	IDT3/4 ONLINE 25P-CBL ∗M E	1	3, 5, 10, or 15 m. Same as for the IDT-III.
	IDT-to-RIS/X-ray apparatus RS232C 9-pin D-sub cross cable	IDT3/4 ONLINE 9S-CBL ∗M E	1	3, 5, 10, or 15 m. Same as for the IDT-III.
	IDT-IV-to-IDT-IV contact signal cable	REM CBL ∗M FOR IDT-IDT E	1	5, 15, 30, 50, or 100 m.
	IDT-IV-to-FCR5000 contact signal cable	REM CBL ∗M FOR IR MAIN D E	1	5, 15, 30, 50, or 100 m. Enables the FCR5000 to turn ON and OFF the IDT-IV power.
		REM CBL ∗M FOR IDT MAIN D E	1	5, 15, 30, 50, or 100 m. Enables the IDT-IV to turn ON and OFF the FCR5000 power.
	IDT-IV-to-HUB contact signal cable	REM CBL ∗M FOR HUB MAIN E	1	5, 15, 30, 50, or 100 m.

The ∗ mark in the "Product abbreviation" column represents the cable length. TT100002.EPS

2.5 Installing the Accessories

■ SIF04A board kit (option)

◆ *NOTE* ◆

When using the SIF04A board, install the SIF04A board driver in the setup process.
☞ *"3. Setup"*

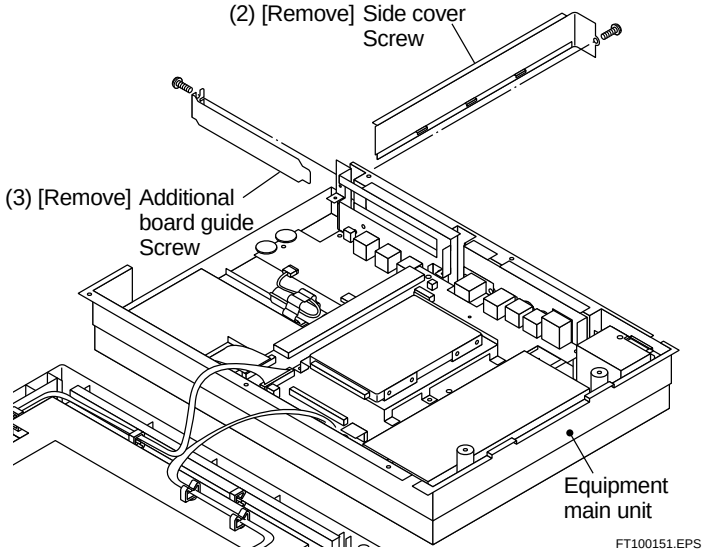
The components of the SIF04A board kit are as follows.

- SIF04A board
- Remote ON/OFF internal wiring cable
- SIF04A board driver floppy disk

(1) Remove the top cover assembly.
☞ "Maintenance, 4.1 Top Cover Assembly"

(2) Remove the side cover.

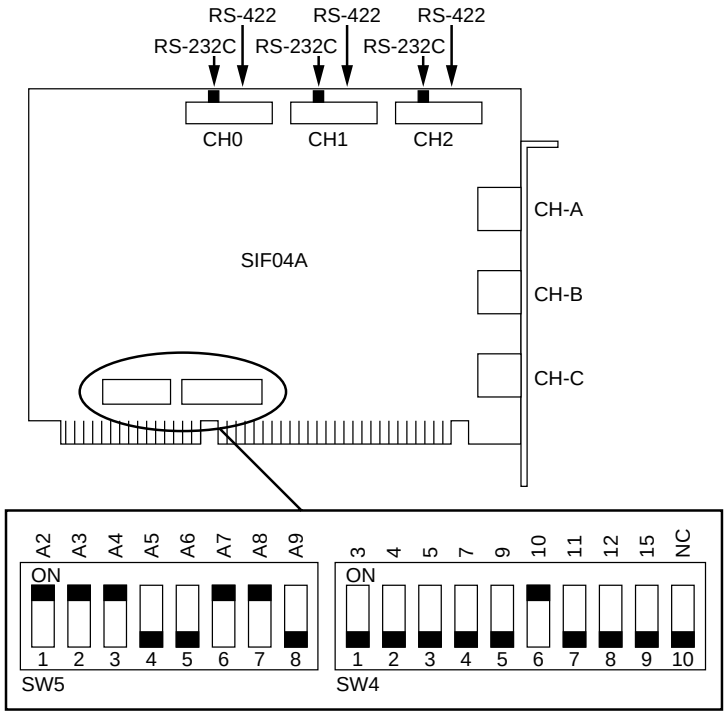
(3) Remove the additional board guide.



◆ *NOTE* ◆

Store the removed expansion board guide for later use.

(4) Make sure that the SIF04A board is set up as indicated below.



FT100162.EPS

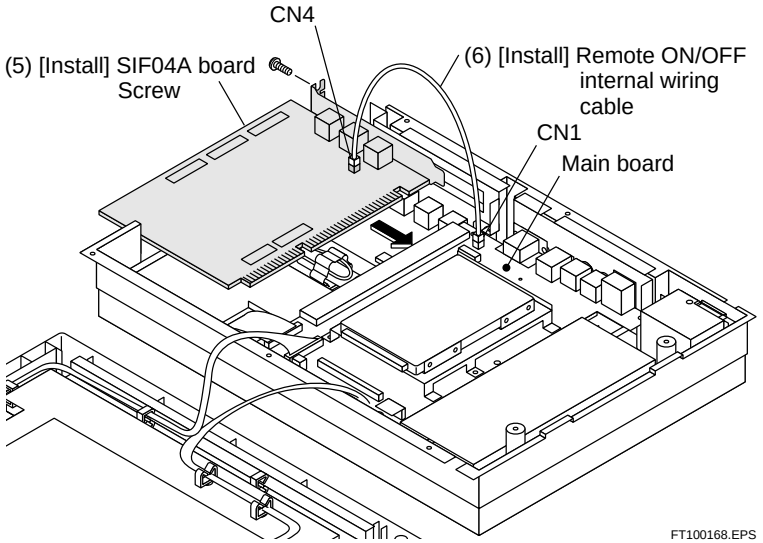
(5) Switch RS-422 and RS-232C using CH0 ~ CH2 on the SIF04A board.

CH0 ~ CH2 correspond to the following connectors.
CH0: CH-A
CH1: CH-B
CH2: CH-C

When setting CH0 ~ CH2, confirm the interface (RS-422 and RS-232C) between connected devices.

(6) Mount the SIF04A board in position.

(7) Connect the remote ON/OFF internal wiring cable.



FT100168.EPS

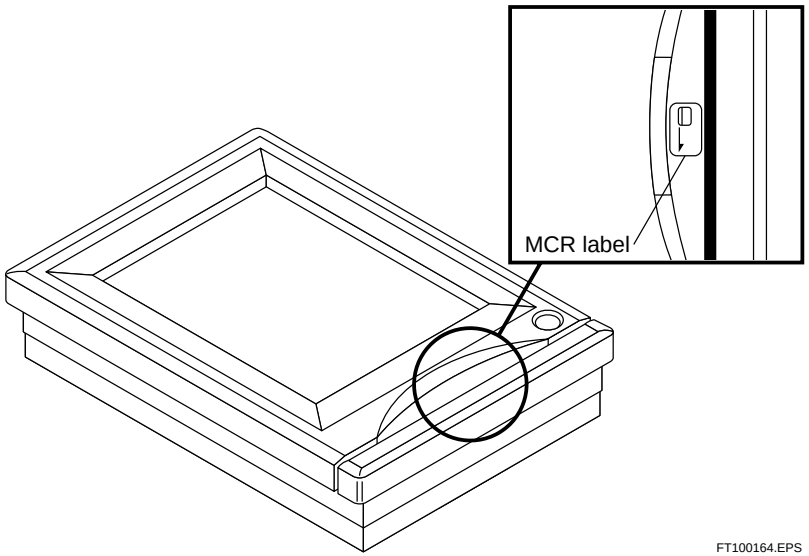
(8) Install the side cover.

(9) Install the top cover assembly.

■ Attaching the MCR label

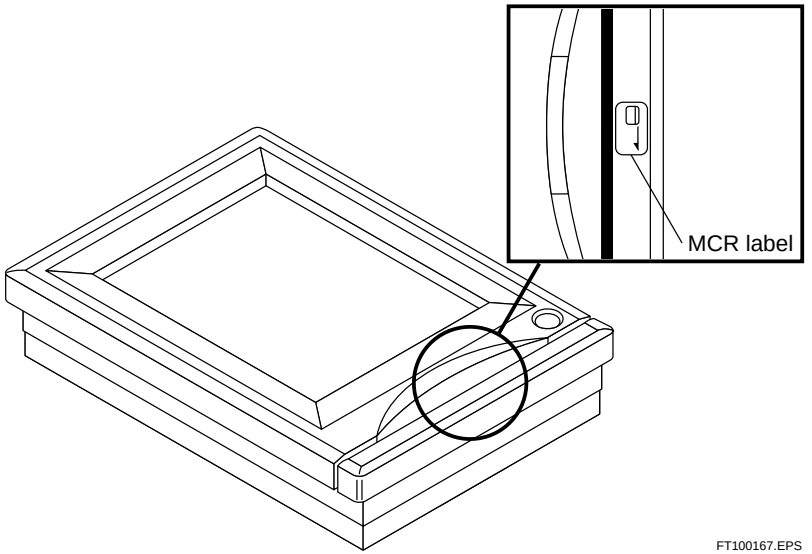
The magnetic card recording surface positioning orientation varies with the employed magnetic card reader type. To indicate the manner of magnetic card insertion, attach the MCR label to the IDT-IV as suggested below.

● For JIS card type



FT100164.EPS

● For ISO card type

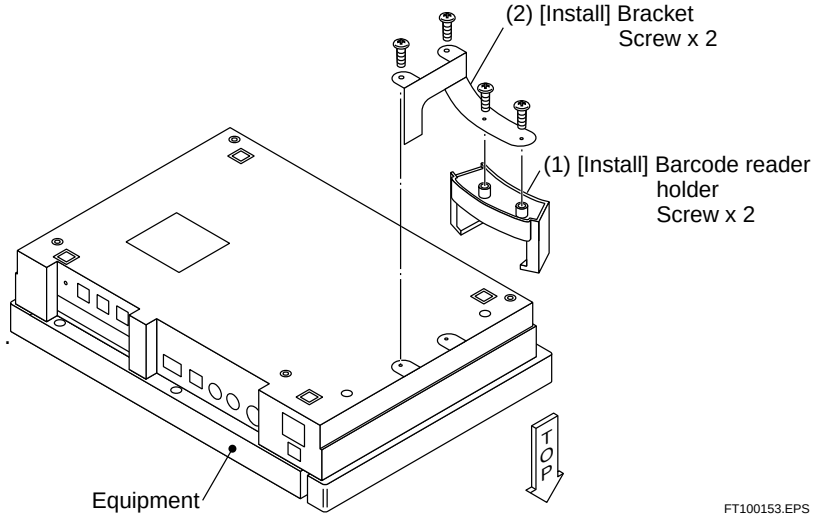


FT100167.EPS

■ Barcode reader

(1) Mount the barcode reader on the bracket.

(2) Turn the equipment upside down and set the bracket in position.

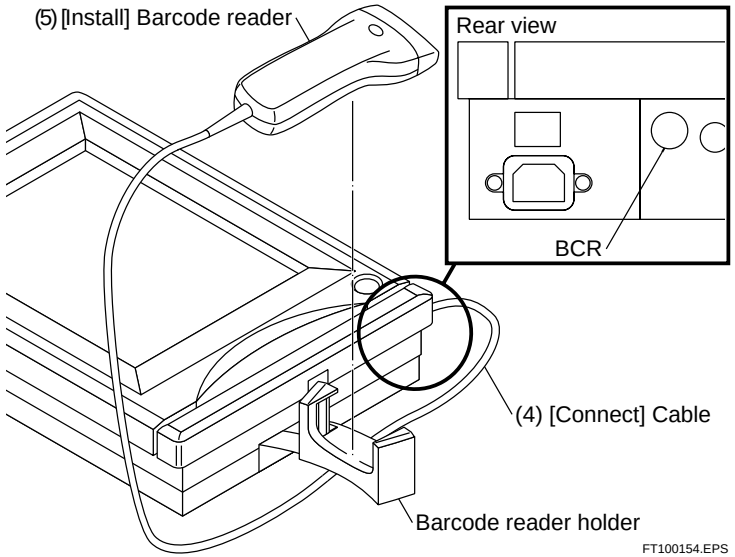


FT100153.EPS

(3) Turn the equipment back to its normal position by turning it upside down again.

(4) Connect the barcode reader cable to the equipment.

(5) Mount the barcode reader on its holder.



■ Wall-mounting bracket

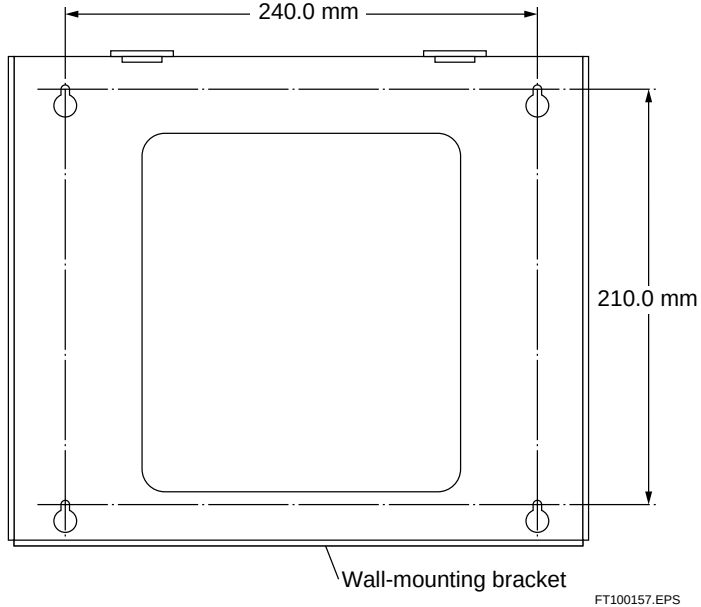
◆◆ *CAUTION* ◆◆

Ensure that the concrete strength of the wall on which the wall-mounting bracket is to be mounted is not less than 210 kgf/cm^2. If the concrete strength is inadequate, the required mount strength will not be obtained. Be sure to check the concrete strength in advance.

(1) Determine the wall-mounting bracket position. Mark the center of each of the four wall-mounting bracket mounting holes for anchor nut installation.

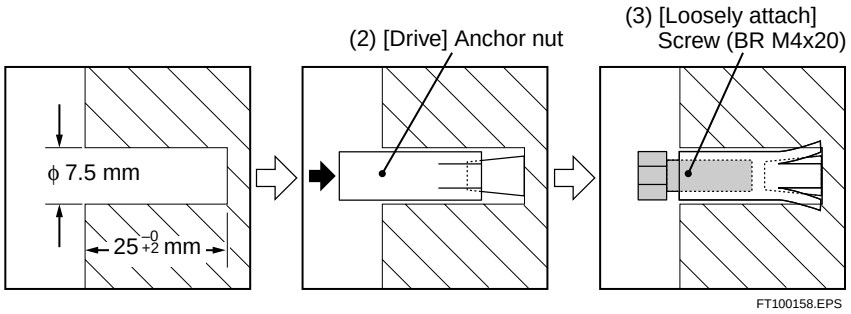
◆ *NOTE* ◆

Be sure that the employed anchor nuts conform to the wall conditions (use the supplied anchor nuts).



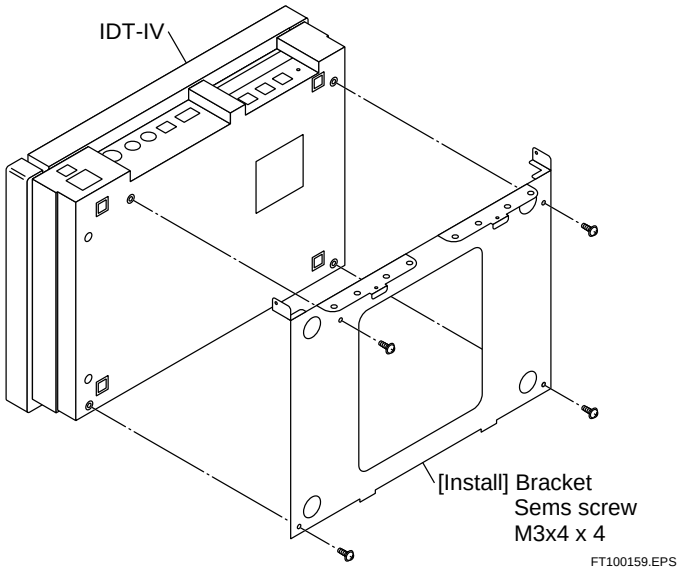
(2) Drill holes (7.5 mm in diameter and 25 mm in depth) at the marked positions and drive four anchor nuts into the holes.

(3) Loosely attach four screws (BR M4x20) to the anchor nuts.



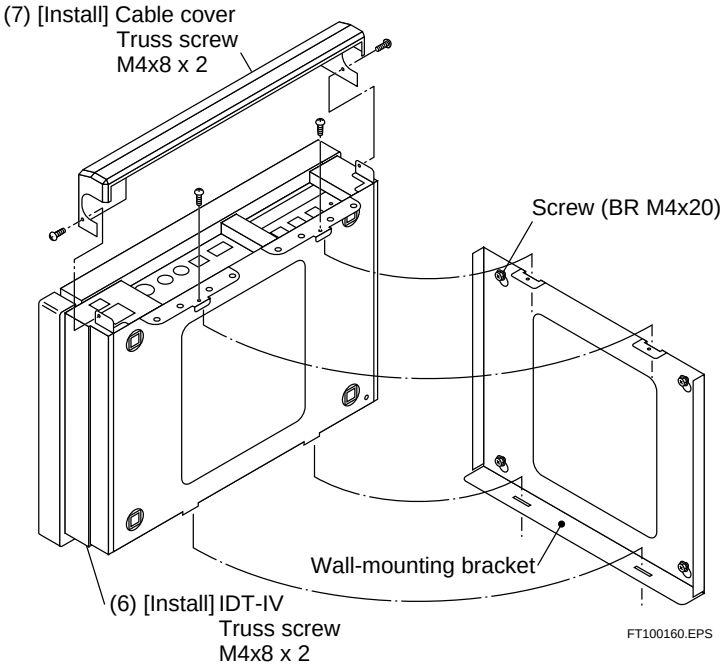
(4) Hook the wall-mounting bracket on the loosely retained screws and then tighten the screws.

(5) Attach the bracket to the bottom surface of the IDT-IV.



(6) Mount the IDT-IV on the wall-mounting bracket.

(7) Install the cable cover.



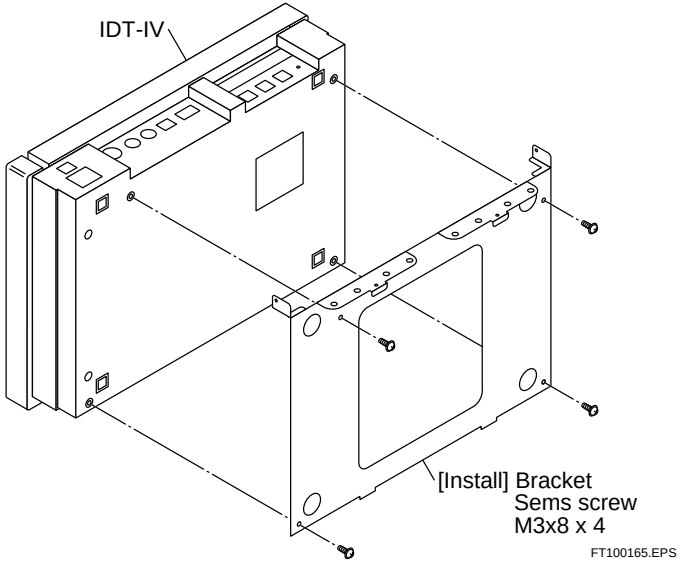
■ Stand

To adjust the stand angle, rotate the knob.

◆ *NOTE* ◆

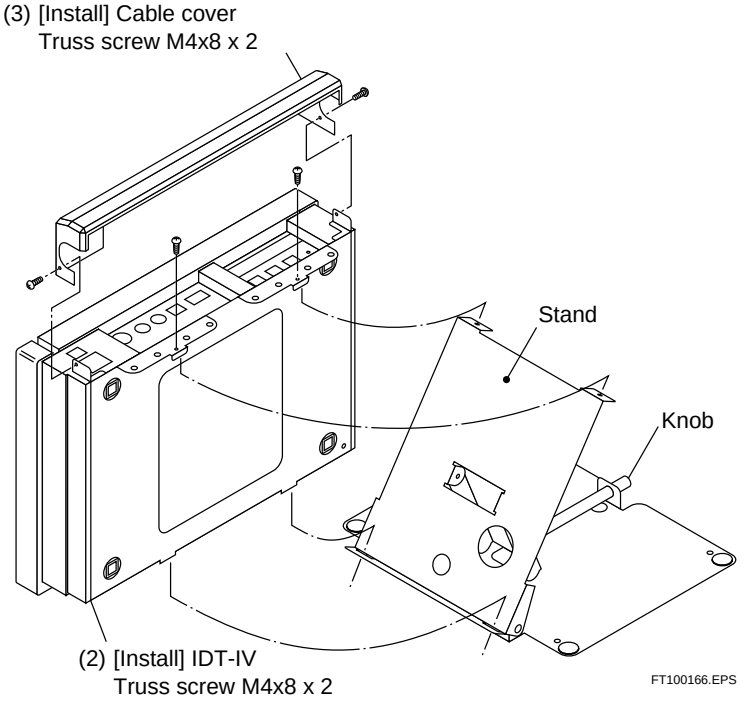
When using the floppy disk drive, place the IDT-IV in a horizontal or vertical position before floppy disk insertion. If you use the floppy disk drive with the IDT-IV tilted, the floppy disk drive may become faulty.

(1) Attach the bracket to the bottom surface of the IDT-IV.

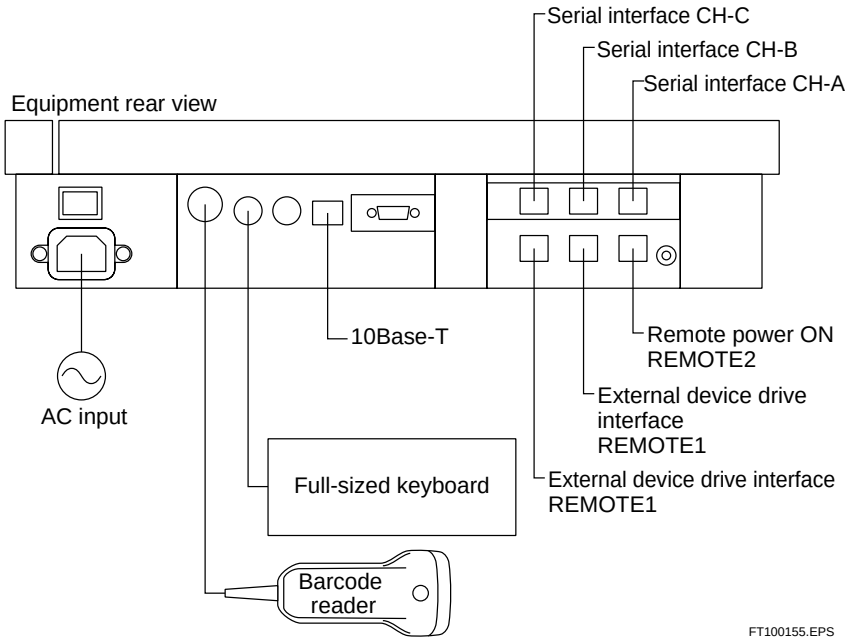


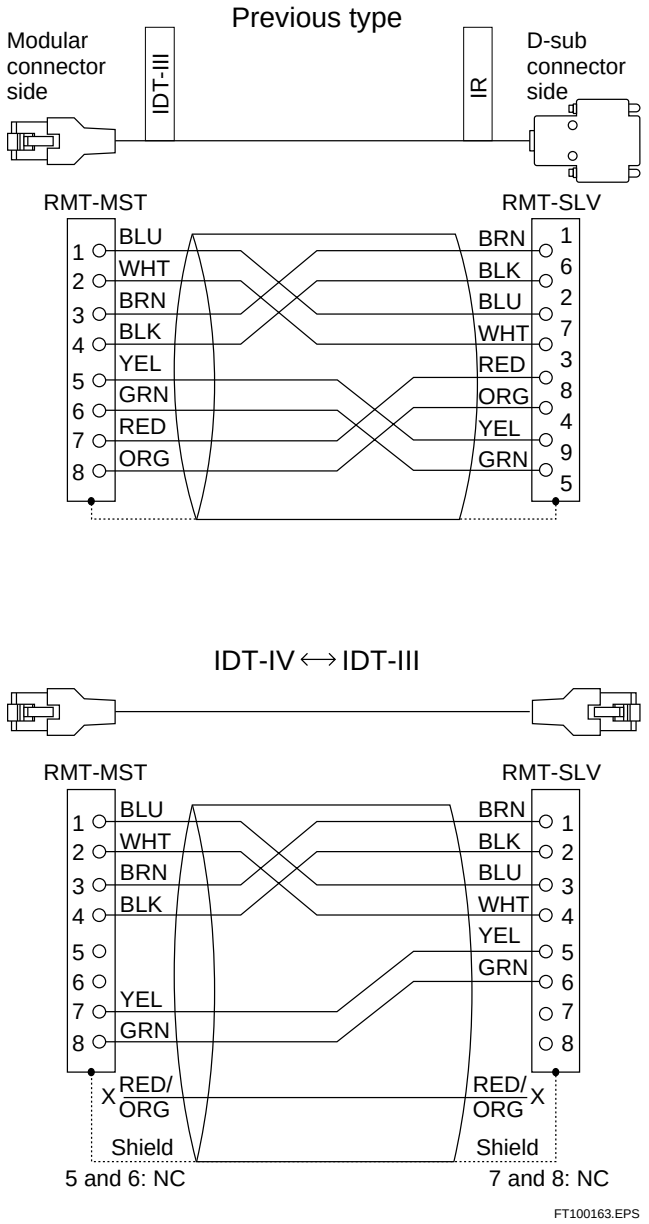
(2) Mount the IDT-IV on the stand.

(3) Install the cable cover.



2.6 Connecting the Cables

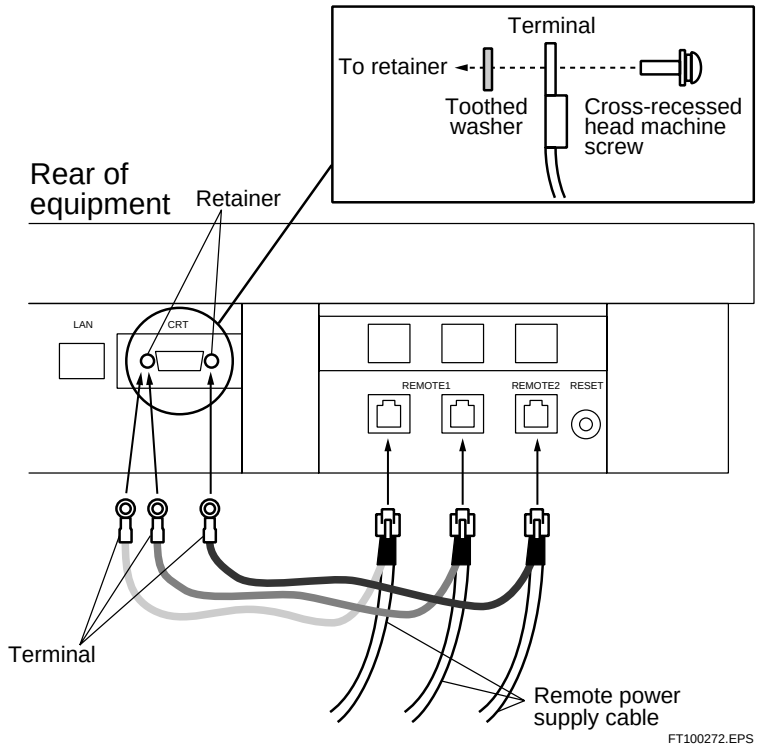




◆ *NOTES* ◆

- *The cable for interface with the 9000 Series image reader does not have master (RMT-MST) and slave (RMT-SLV) polarities. The relevant setup is to be defined with the a DIP switch mounted on the CPU board.*
- *The cable for interface with the IDT-III has master (RMT-MST) and slave (RMT-SLV) polarities, which must be connected correctly.*
- *For equipment installation in the U.S., use cables that comply with the NEC725 DP-3/CL-2 requirements.*

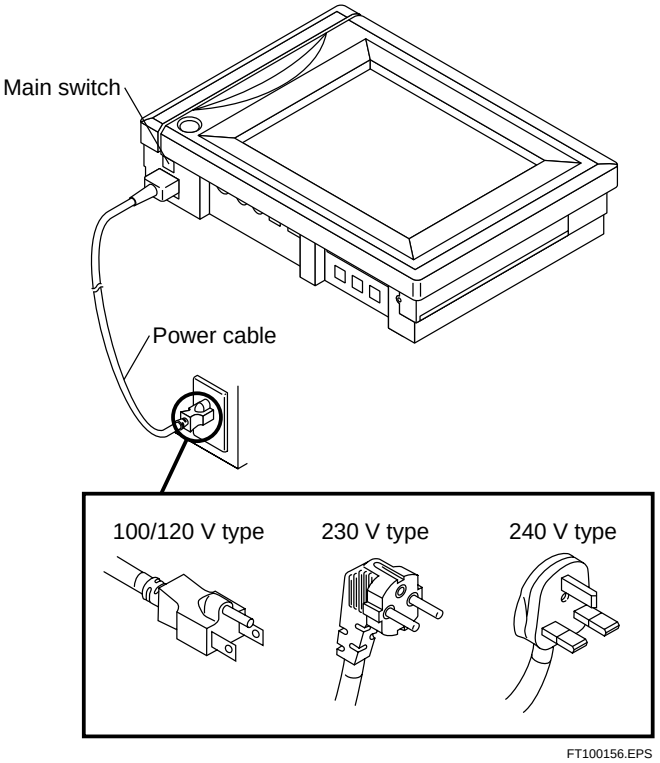
■ Remote power supply cable



2.7 Connecting to the Power Source

(1) Make sure that the main switch is OFF.

(2) Connect the power cable to the power source.

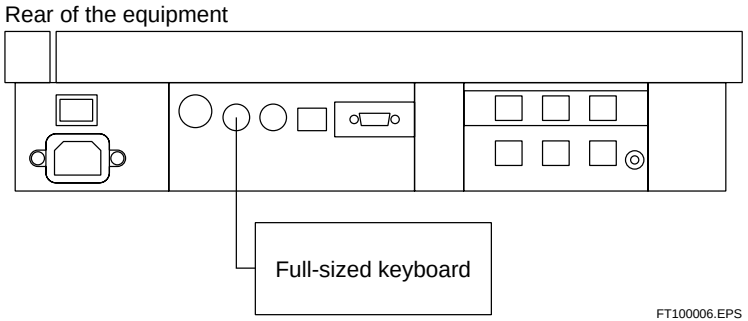


3. Setup

Presented next are the IDT-IV operation procedures, a mode transition diagram, information necessary for setups, and the software setup procedure. Note that a full-sized keyboard is required for system setup.

■ Connecting a full-sized keyboard

Connect the cable of a full-sized keyboard to the associated connector on the rear of the equipment.

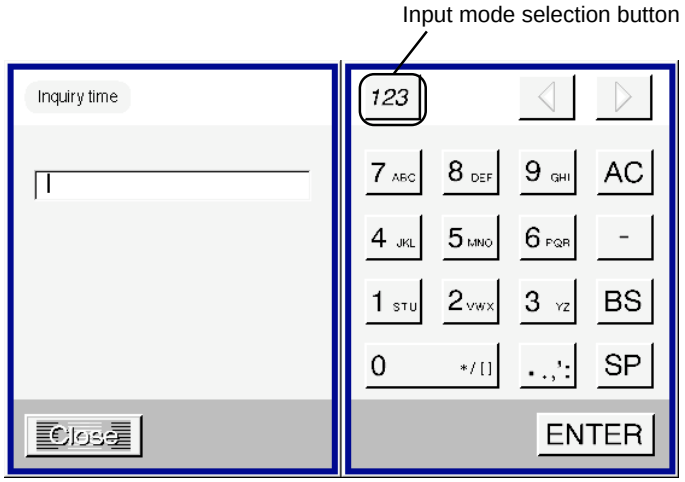


FT100006.EPS

■ IDT-IV operating procedures

● Making entries

Use the touch panel to activate operating control buttons and make character entries. To enter characters, use the virtual keypad. The virtual keypad appears when you touch the virtual keypad button at the upper right-hand corner of the screen.

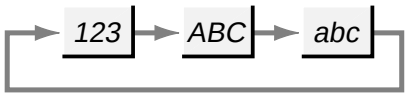


FT100007.EPS

The numeral input mode prevails upon virtual keypad display. The input character type can be changed by pressing the input mode selector button.

The relationship between the input mode selector button marking and input character type is indicated below.

- [123]: Numeral input mode
- [ABC]: Upper-case alphabetical letter input mode
- [abc]: Lower-case alphabetical letter input mode



FT100047.EPS

Because a full-sized keyboard is connected for equipment installation purpose, it may be used to enter characters.

◆ *NOTE* ◆

Ensure that the Caps Lock key is OFF.
If it is ON, the relations between upper- and lower-case alphabetical letter entries are reversed.

● Changing the page

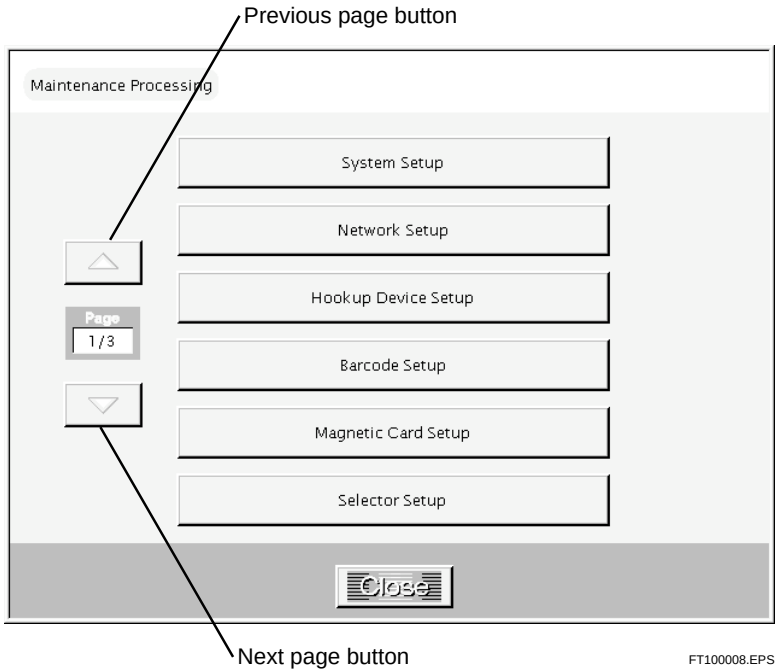
When the amount of information to be displayed is too large to fit on the screen, it is displayed by two or more display pages. To move between display pages, use the previous page and next page buttons.

: Previous page button

Displays the previous page. If you touch this button from the first page, the last page appears.

: Next page button

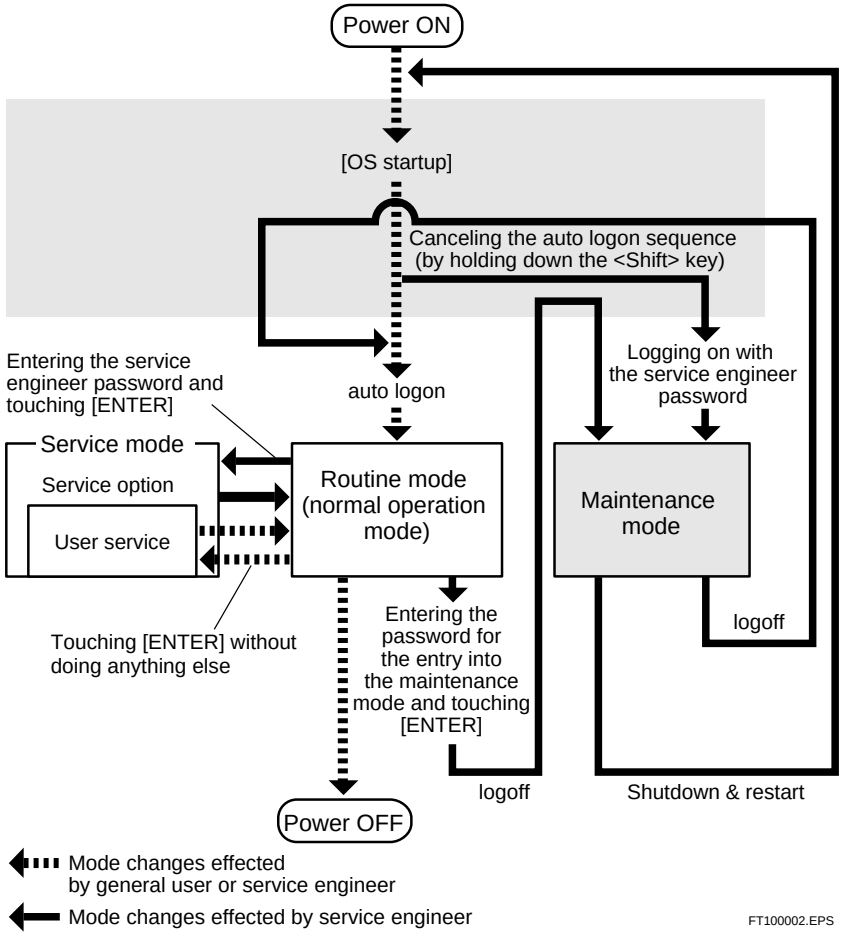
Displays the next page. If you touch this button from the last page, the first page appears.



■ Mode transition diagram

The IDT-IV has three different processing modes: service mode, routine mode, and maintenance mode.

The mode transition diagram is shown below.

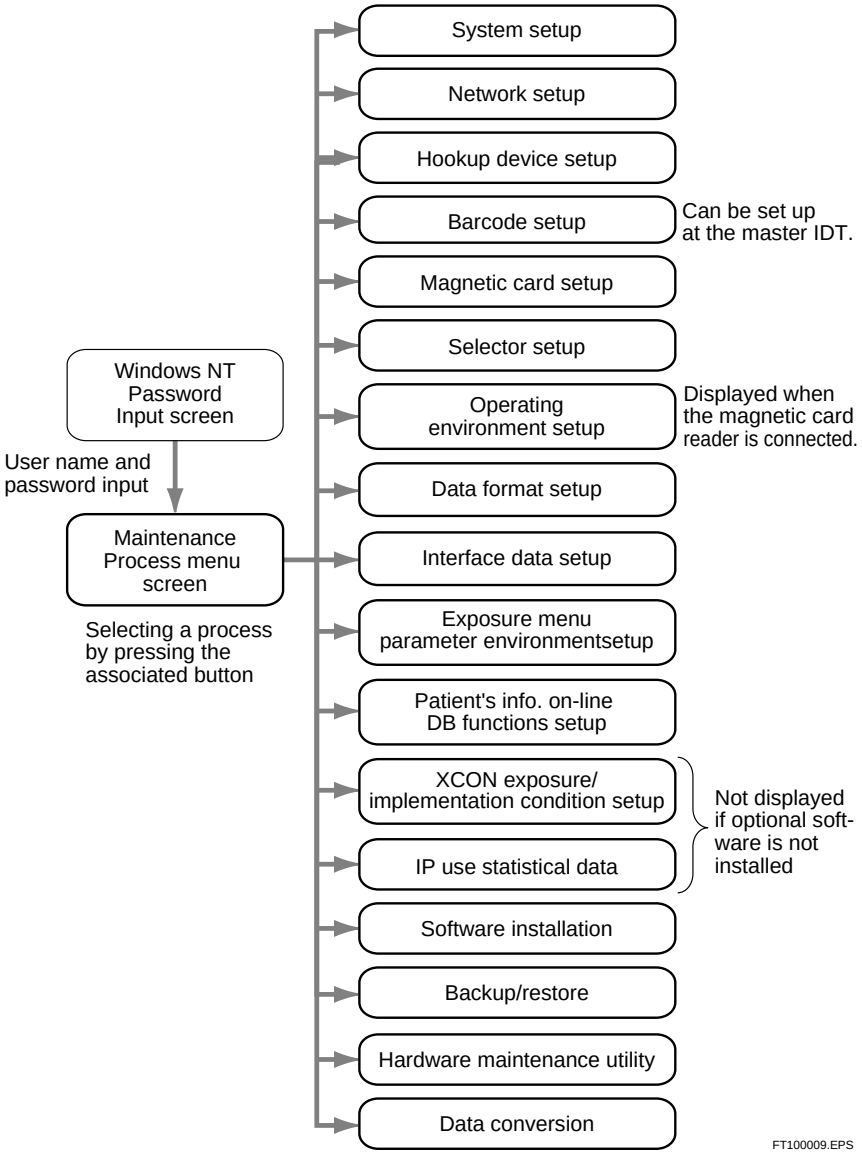


Since the IDT-IV is factory set up to initiate the auto logon sequence, the routine mode starts without displaying the OS logon screen when you turn ON the power.

Various setup procedures are to be performed in the maintenance mode during the installation process.

■ Maintenance mode screen transition diagram

The maintenance mode screen transition diagram is shown below.



3.1 Entering the Maintenance Mode and Shutting Down the Equipment

This section describes the procedure for entering the maintenance mode and the procedure for shutting down the equipment from the maintenance mode.

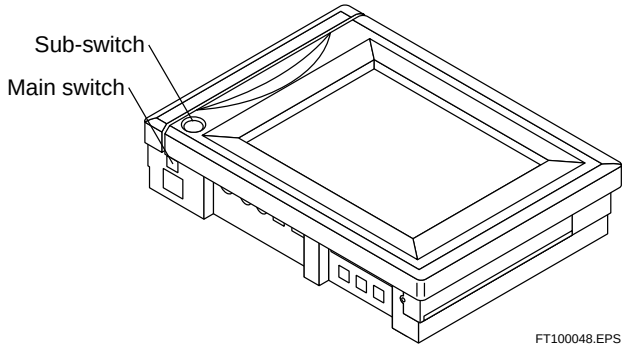
3.1.1 Entering the maintenance mode

The maintenance mode can be called up either by canceling the auto logon sequence or from the routine mode. These two different maintenance mode entry procedures are described below.

■ Entering the maintenance mode by canceling the auto logon sequence

(1) If the main switch is OFF, turn it ON.

(2) Turn ON the sub-switch.



(3) When the Windows NT's blue startup screen opens, press and hold down the <Shift> key until the logon message appears.
→ The logon message appears.

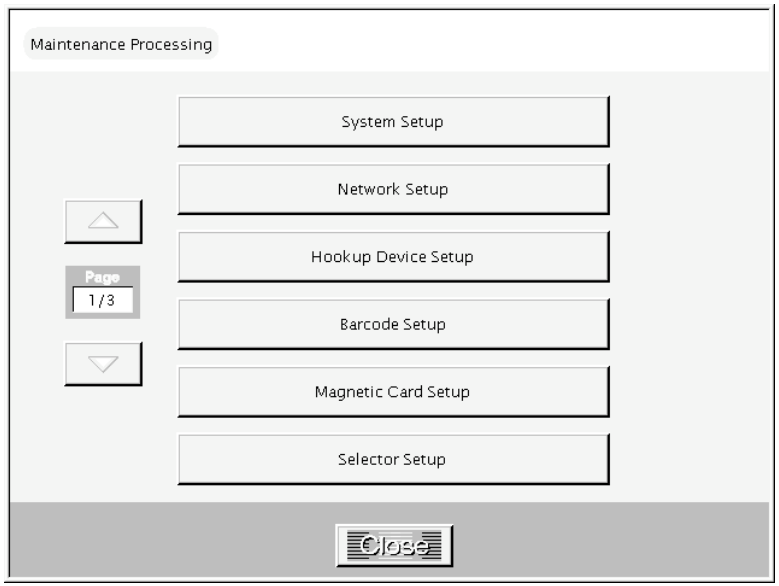
If the routine mode starts due to a delayed execution of step (4), switch to the maintenance mode by performing "■ Entering the maintenance mode from the routine mode" steps (4) and beyond.

(4) Enter "fcr" as the user name.

(5) Enter "fcr" as the password.
The entered password does not appear on the display.

(6) Touch [OK].

➔ The maintenance mode is then invoked so that the "Maintenance process" menu screen appears on the display.



FT100010.EPS

■ Entering the maintenance mode from the routine mode

(1) If the main switch is OFF, turn it ON.

(2) Turn ON the sub-switch.

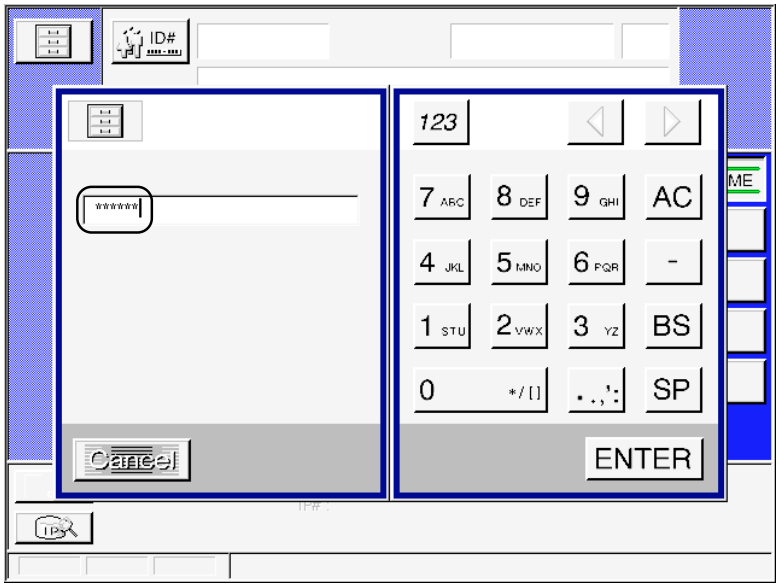
➔ The routine mode starts in about 5 minutes.

(3) Select the utility mode.

If the "Patient ID Information Input" screen is displayed, touch [Cancel] and then select the utility mode.

➔ The "Password Input" screen opens.

The password (000000, displayed as ******) for permitting the user to enter the service mode is displayed in the character string input area.



FT100011.EPS

(4) Touch [AC] to delete the default password for user's service mode entry.

➔ The character string in the input area is then cleared.

(5) Touch [123].

➔ The upper-case alphabetical character input mode then prevails.

(6) Touch the [7], [8], [9], [4], [5], and [6] buttons in sequence and then touch [ENTER].

The password "ADGJMP" is then entered. The screen reads "******".

➔ The maintenance mode then starts with the "Maintenance process" menu screen opened.

3.1.2 Shutting down the machine from the maintenance mode

This section describes the procedure for shutting down the equipment from the maintenance mode.

(1) While the "Maintenance process" menu screen is displayed, touch [Close].

➔ The maintenance termination confirmation screen appears.

(2) Touch [Yes].

● If control panel setup has been performed from the "System setup" screen

➔ The shutdown confirmation screen appears.

Touch [No].

➔ The routine mode starts after logoff.

◆ *NOTE* ◆

Do not use the routine mode at this moment. The control panel setup does not take effect unless you shut down the machine.

● If control panel setup has not been performed from the "System setup" screen

➔ The routine mode starts after logoff.

(3) Turn OFF the sub-switch.

➔ The computer shutdown screen opens. After a while, the equipment shuts down.

◆ *NOTE* ◆

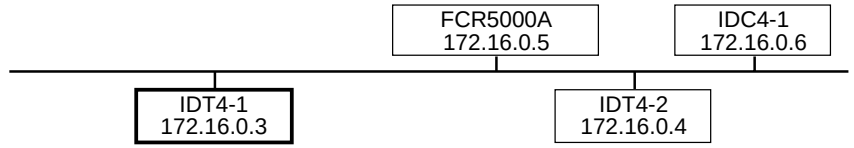
Do not turn OFF the main switch. If you turn OFF the main switch during remote power supply control, the remote power ON/OFF function is disabled.

3.2 Software Setup Procedures

To complete setup with increased efficiency, perform software setup in the following sequence.

IMPORTANT: In case you have one or more Slave IDT to be installed together with Master IDT, follow the procedures described below.

● Predetermine the IP addresses of the master and slave IDT and IDC4 units (if used) and the 5000, and complete grouping for them.

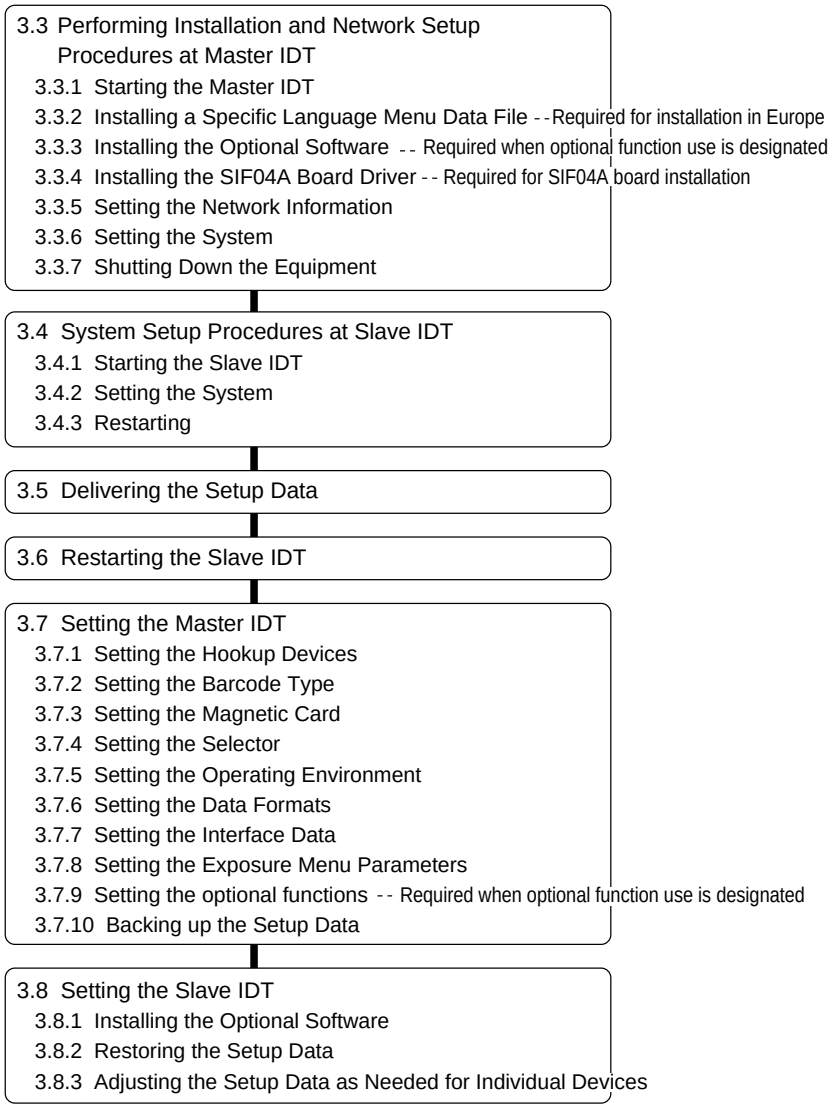


Master	Slave
1. Start the machine without connecting the network cable.	5. Start the machine without connecting the network cable.
2. Choose "Network setup" in the maintenance mode, and enter the master setup data in the host table together with the setup data about the slaves and the 5000 (this setup can be performed at the master alone). ☞ 3.3.5 "Setting the Network Information"	6. Choose "System setup" in the maintenance mode. From the "Control panel" on the screen, choose "Network" and enter the computer name/IP address. If necessary, confirm the "Date & Time" and "Keyboard type" setup data ☞ 3.3.6 "Setting the System"
3. Choose "System setup" in the maintenance mode. From the "Control panel" on the screen, choose "Network" and enter the computer name/IP address. If necessary, confirm the "Date & Time" and "Keyboard type" setup data. ☞ 3.3.6 "Setting the System"	7. While the maintenance mode screen is displayed, turn OFF the power (this assures that the maintenance mode prevails when the machine starts up the next).
4. While the maintenance mode screen is displayed, turn OFF the power (this assures that the maintenance mode pre-vails when the machine starts up the next).	8. Connect the network cable and then start the machine. Although the startup process abnormally ends due to an error during application startup, leave the machine as is. (This is because the entry of this slave is not made in the host table.)
9. Connect the network cable and then start the machine. The machine starts up with the maintenance mode screen displayed.	11. When the [DELIVERY] execution process is completed by the master, restart the machine. (The machine then normally starts up with the maintenance mode screen displayed.) ☞ 3.6 Restarting the Slave IDT"
10. Choose "Network setup" in the maintenance mode and then execute 'DELIVERY". ☞ 3.5 "Delivering the Setup Data"	
12. Perform "Hookup device setup" and "Operating environment setup". ☞ 3.7 "Setting the Master IDT"	13. Alter completion of the above steps, enter individual setup data as needed.

NOTE: If the machine is started up in step 8 or 9 without connecting the network cable, the communication cannot be established even if the cable is connected after startup. In such an instance, restart the system after connecting the cable.

FT100049.EPS

The software setup sequence is indicated below.


3.3 Performing Installation and Network Setup Procedures at Master IDT
3.3.1 Starting the Master IDT
3.3.2 Installing a Specific Language Menu Data File -- Required for installation in Europe
3.3.3 Installing the Optional Software -- Required when optional function use is designated
3.3.4 Installing the SIF04A Board Driver -- Required for SIF04A board installation
3.3.5 Setting the Network Information
3.3.6 Setting the System
3.3.7 Shutting Down the Equipment
3.4 System Setup Procedures at Slave IDT
3.4.1 Starting the Slave IDT
3.4.2 Setting the System
3.4.3 Restarting
3.5 Delivering the Setup Data
3.6 Restarting the Slave IDT
3.7 Setting the Master IDT
3.7.1 Setting the Hookup Devices
3.7.2 Setting the Barcode Type
3.7.3 Setting the Magnetic Card
3.7.4 Setting the Selector
3.7.5 Setting the Operating Environment
3.7.6 Setting the Data Formats
3.7.7 Setting the Interface Data
3.7.8 Setting the Exposure Menu Parameters
3.7.9 Setting the optional functions -- Required when optional function use is designated
3.7.10 Backing up the Setup Data
3.8 Setting the Slave IDT
3.8.1 Installing the Optional Software
3.8.2 Restoring the Setup Data
3.8.3 Adjusting the Setup Data as Needed for Individual Devices

FT100012.EPS

3.3 Performing Installation and Network Setup Procedures at Master IDT

Install the software and perform network setup at the master IDT. Network setup is possible only at the maste IDT.

3.3.1 Starting the Master IDT

◆ ***NOTE*** ◆

Do not make the network cable connection.

Start the master IDT.

☞ "3.1.1 Entering the Maintenance Mode"

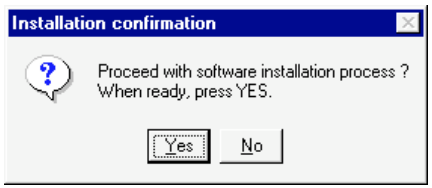
3.3.2 Installing the specific language menu data file (Europe only)

When installing the IDT-IV in a European country, it is necessary to install an appropriate menu data file to ensure that menus are displayed in a language used in that country.

Software used: Floppy disk that contains the menu data file

(1) From the "Maintenance process" menu screen, select [Software installation].

→ The "Installation confirmation" dialog box opens.



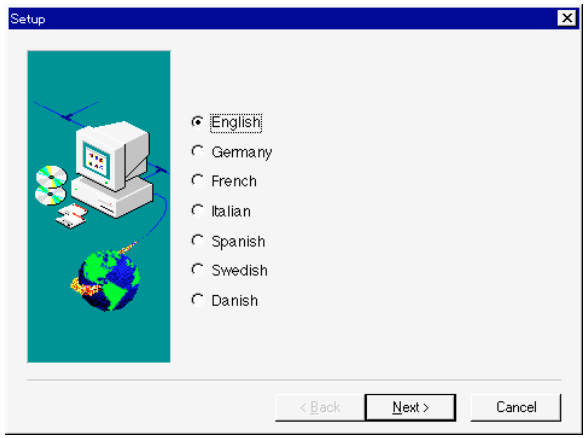
FT100013.EPS

(2) Prepare the floppy disk that contains the specific language menu data file. Insert this disk into the floppy disk drive.

(3) Touch [Yes].

The screen then shows nothing for a period of about 10 seconds.

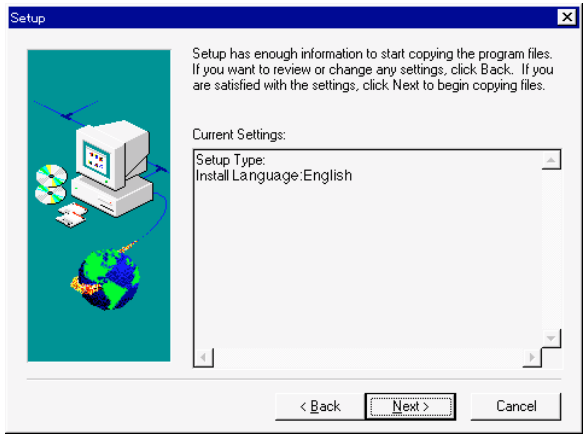
➔ The installer starts and displays the setup type selection screen.



FT100172.EPS

(4) Select the language to be used, and then touch [Next].

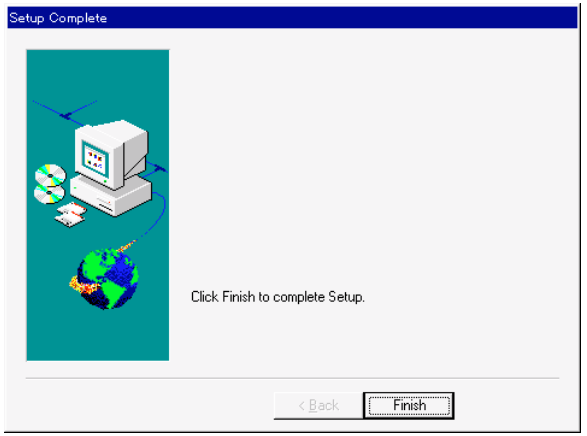
➔ The setup type confirmation screen opens.


Setup
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
Setup Type:
Install Language:English
< Back
Next >
Cancel

FT100173.EPS

(5) Touch [Next].

➔ After completion of installation, the "Setup Complete" confirmation screen opens.



FT100174.EPS

(6) Touch [Finish].

➔ You are returned to the "Maintenance process" menu screen.

3.3.3 Installing the optional software

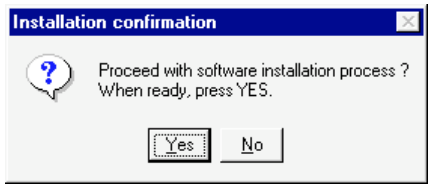
For the use of an optional function, it is necessary to install the optional software.

Software used: Floppy disk containing the patient's info. on-line DB functions software or floppy disk containing the radiographic equipment connection function software

Repeat the following steps for each optional software to be installed.

(1) From the "Maintenance process" menu screen, select [Software installation].

➔ The "Installation confirmation" dialog box opens.



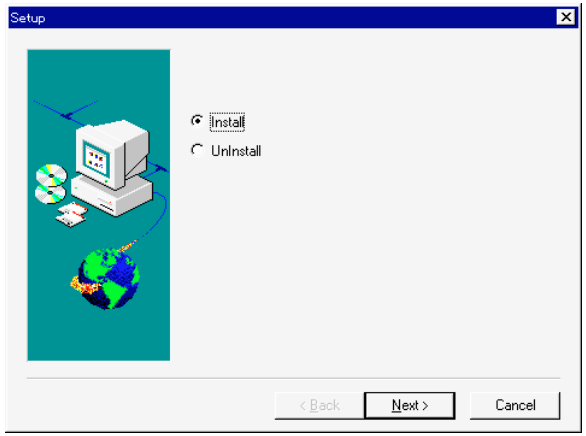
FT100013.EPS

(2) Prepare the floppy disk that contains the optional software. Insert the disk into the floppy disk drive.

(3) Touch [Yes].

The screen then shows nothing for a period of about 10 seconds.

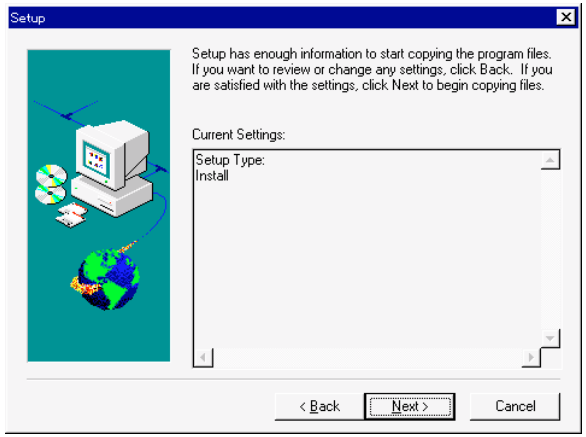
➔ The installer starts and displays the Setup type selection screen.



FT100179.EPS

(4) Select "Install" and then touch [Next].

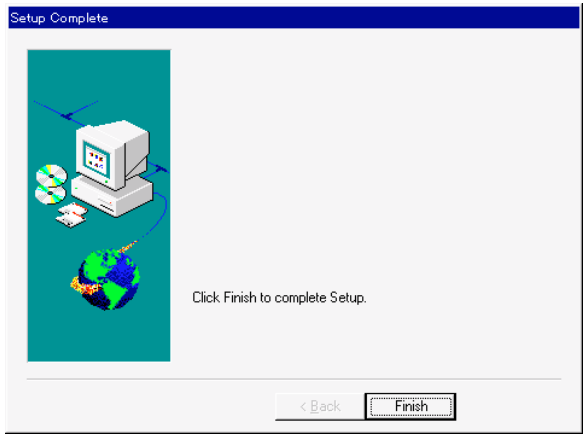
➔ The Setup type confirmation screen opens.


Setup
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
Setup Type:
Install
< Back
Next >
Cancel

FT100180.EPS

(5) Touch [Next].

➔ After completion of installation, the “Setup complete” confirmation screen opens.



FT100181.EPS

(6) Touch [Finish].

➔ You are returned to the “Maintenance process” menu screen.

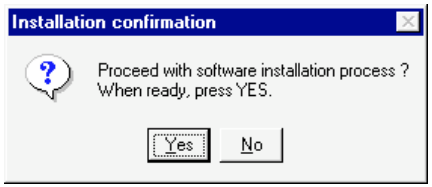
3.3.4 Installing the SIF04A board driver

After the SIF04A board is installed in the IDT-IV, it is necessary to install the SIF04A board driver.

Software used: Floppy disk that contains the SIF04A board driver

(1) From the “Maintenance process” menu screen, select [Software installation].

➔ The “Installation confirmation” dialog box opens.



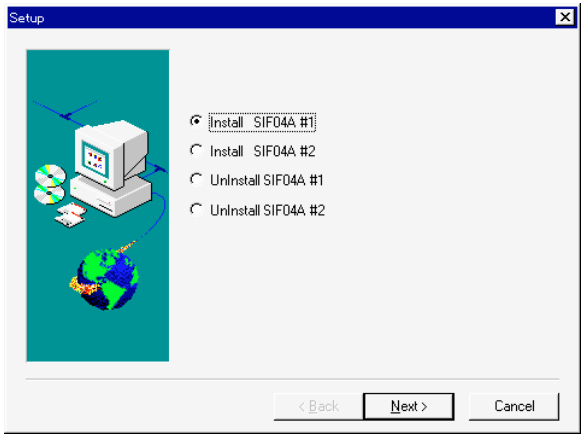
FT100013.EPS

(2) Prepare the floppy disk that contains the SIF04A board driver. Insert the disk into the floppy disk drive.

(3) Touch [Yes].

The screen then shows nothing for a period of about 10 seconds.

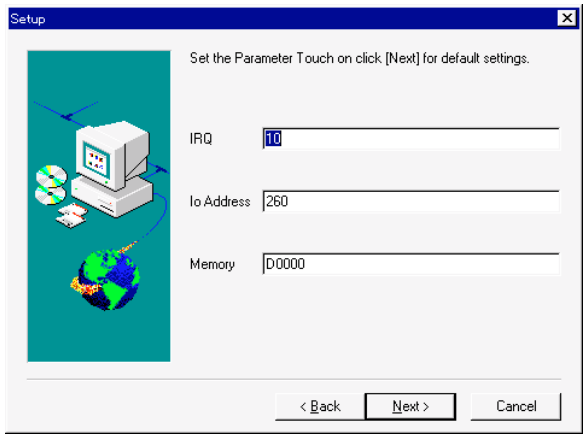
➔ The installer starts and displays the Setup type selection screen.



FT100175.EPS

(4) Select “Install SIF04A #1” and then touch [Next].

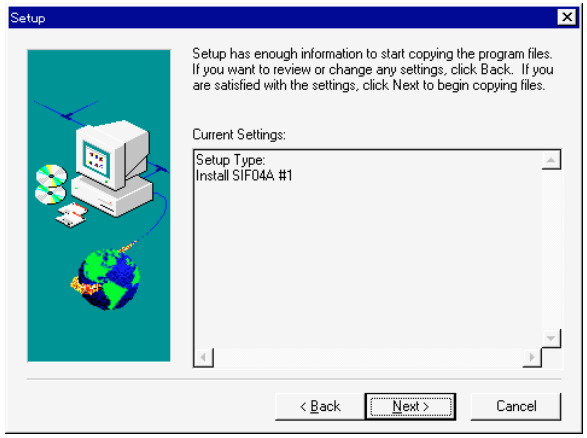
➔ The Setup confirmation screen opens.



FT100176.EPS

(5) Verify the settings and then touch [Next].

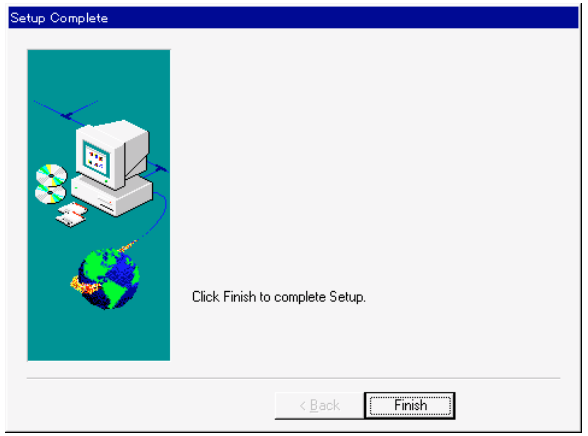
➔ The Setup type confirmation screen opens.


Setup
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
Setup Type:
Install SIF04A #1
< Back
Next >
Cancel

FT100177.EPS

(6) Touch [Next].

➔ After completion of installation, the “Setup complete” confirmation screen opens.



FT100174.EPS

(7) Touch [Finish].

➔ You are returned to the “Maintenance process” menu screen.

3.3.5 Setting the network information

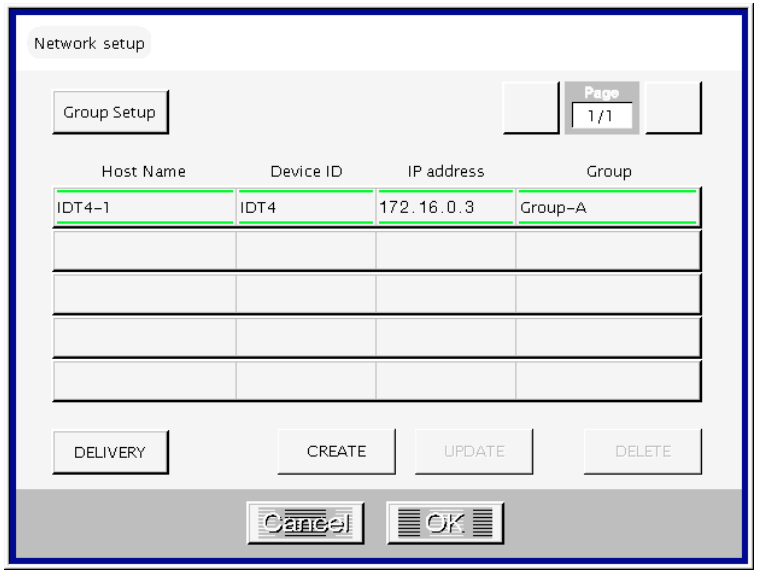
Refer to the system configuration diagram and device connection table that were created as directed in section 2.2, “System Configuration and Connection,” and perform the following network information setup procedures.

- Setting the group information (Use this setting if the group name has been added or changed.)
- Setting the host information
- Entering the gateway host name

Concerning groups (IP information management group) and gateways (IP information gateway), see Maintenance, “3.4.3, IP registration information management/sharing function."

From the “Maintenance process” menu screen, select [Network setup].

➔ The “Network setup” screen opens.



FT100022.EPS

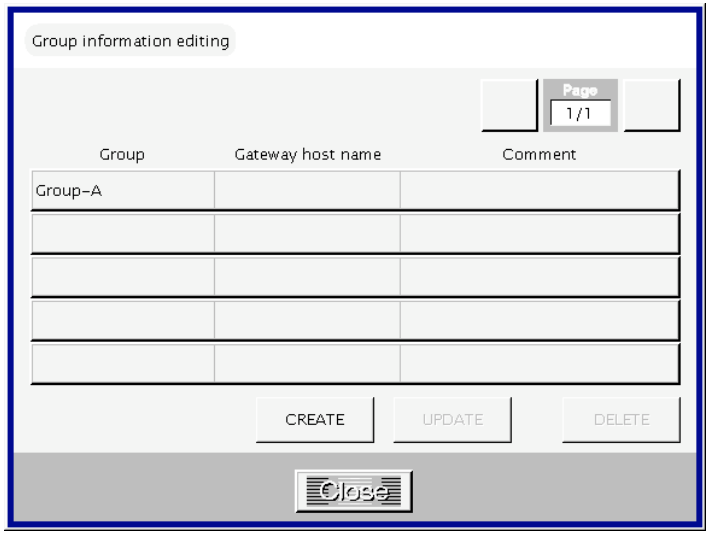
■ Setting the group information

To add or change the group information, perform the following procedures.

If the number of networked IDT and IDC units exceeds 20, add group B in addition to default group A.

From the “Network setup” screen, touch [Group Setup].

➔ The “Group information editing” screen opens.



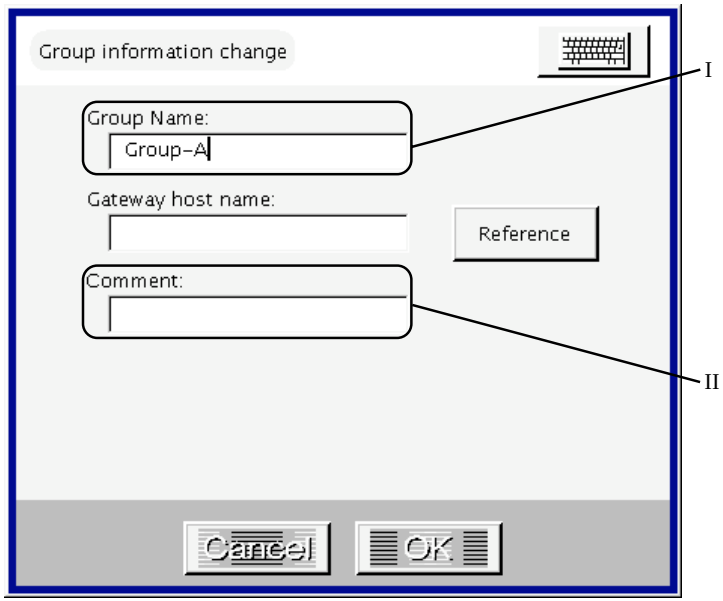
FT100023.EPS

● Adding or change the group information

(1) To add: Touch [CREATE] in the “Group information editing” screen.

To change: Select the target group information from the “Group information editing” screen and then touch [UPDATE].

➔ The “Group information change” screen opens.



FT100024.EPS

I. Enter the group name.

II. Enter a comment if necessary.

(2) Touch [OK].

➔ The system adds or changes the group information and then brings you back to the “Group information editing” screen.

◆ *NOTE* ◆

If you add group information, be sure to set up the host information for the added group.

(3) Touch [Close].

➔ You are returned to the “Network setup” screen.

● Deleting the group information

If any group information needs to be deleted, perform the following procedure.

(1) While the “Group information editing” screen is displayed, select the group information to be deleted.

(2) Touch [DELETE].

➔ The confirmation message box opens.

(3) Touch [Yes].

➔ The selected group information is then deleted.

(4) Touch [Close].

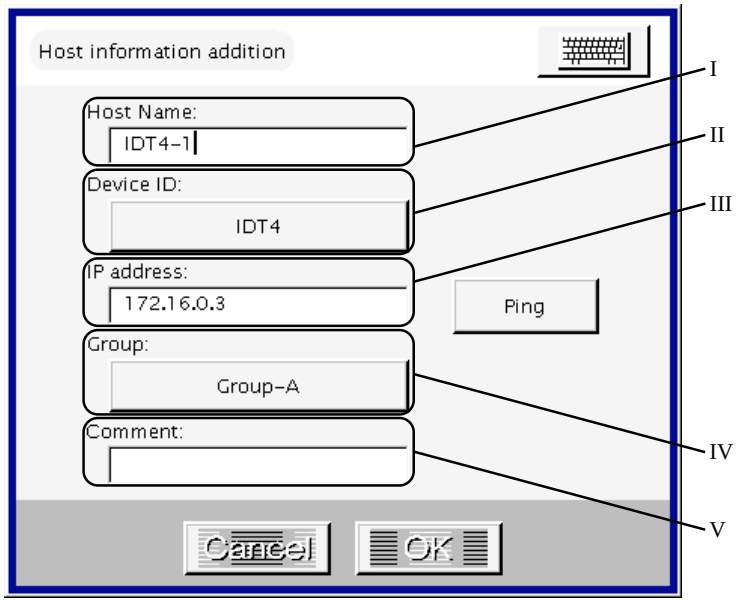
➔ You are returned to the “Network setup” screen.

■ Setting the host information

To add or change the host information, use the following procedure.

(1) To add: Touch [CREATE] in the "Network setup" screen.
To change: Select the target host information from the "Network setup" screen and then touch [UPDATE].

➔ The "Host information addition" screen opens.



FT100025.EPS

◆ NOTE ◆

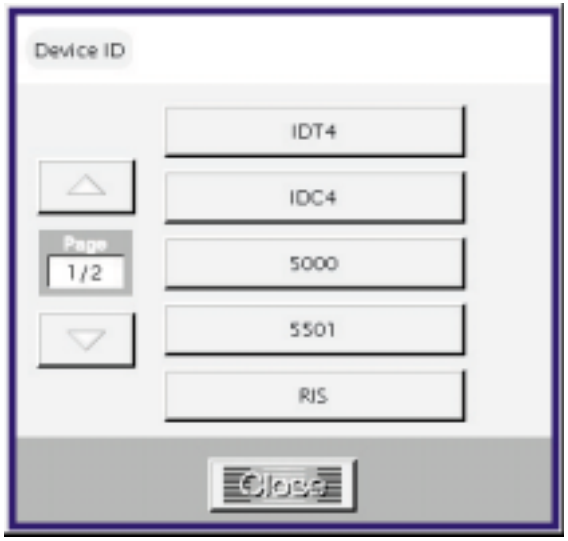
Do not press the [Ping] button here.
The [Ping] button is for confirming whether the device indicated on the "Host information addition" screen is properly connected up to the network.

I. Enter the host name.

II. Touch the [Device ID:] button.

➔ The "Device ID" screen opens.

Select a device ID.



FT100281.EPS

◆ NOTE ◆

For the selection of "IDC4", be sure that the 3.3.3 "Installing the optional software" procedure is completed. It is also necessary to perform RIS server setup as directed in section 3.7.8, "Setting the optional functions."

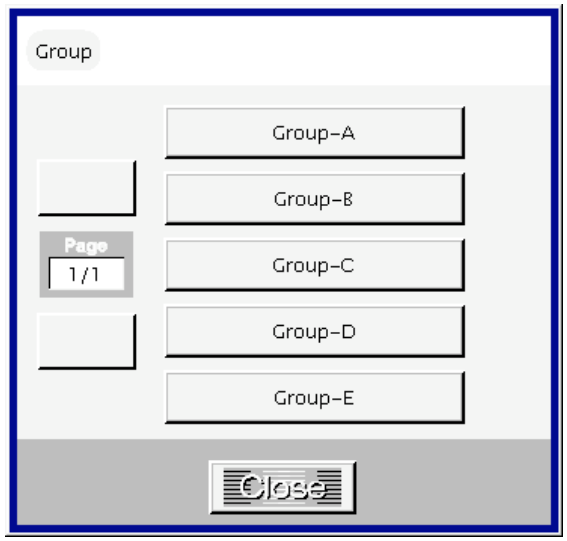
➔ You are returned to the "Host information editing" screen.

III. Enter the IP address.

IV. Touch the [Group:] button.

➔ The Group screen opens.

Select a group that was set up as explained under "■ Setting the group information".



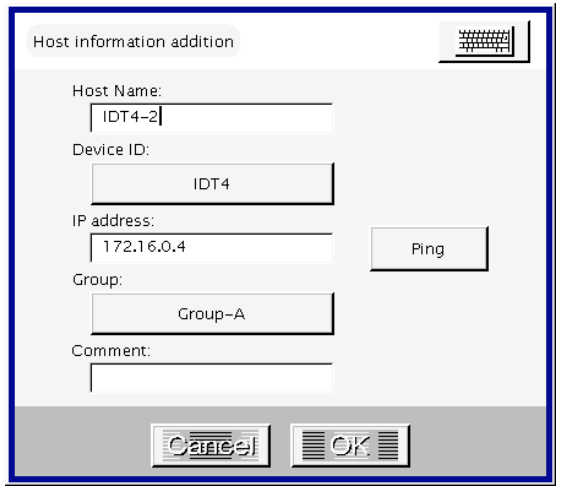
FT100282.EPS

➔ You are returned to the "Host information editing" screen.

V. Enter a comment if necessary.

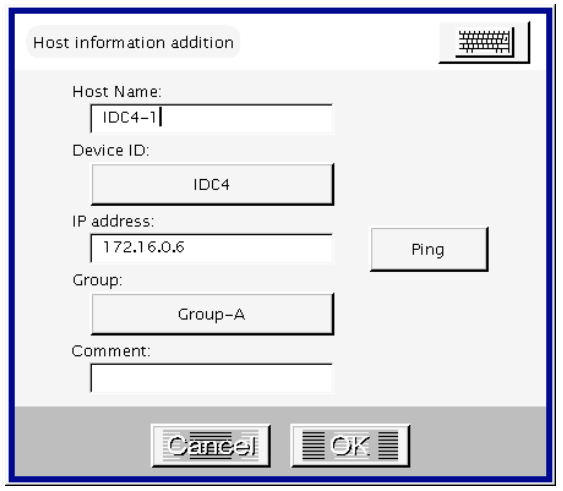
A setup example for the "Connection Example" shown on page Installation-16 is given below.

• IDT4-2



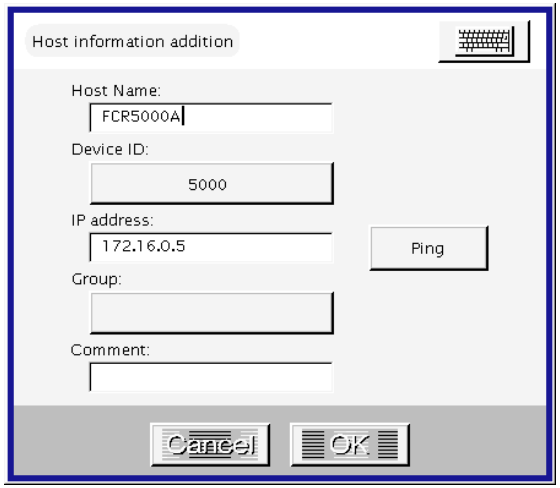
FT1000237.EPS

• IDC4-1



FT1000238.EPS

• FCR5000A



FT1000239.EPS

(2) Touch [OK].

➔ The system adds or changes the host information and returns you to the "Network setup" screen.

● Deleting the host information

If host information deletion is needed, perform the following steps.

(1) While the "Network setup" screen displayed, select the host information to be deleted.

(2) Touch [DELETE].

➔ The confirmation message box opens.

(3) Touch [Yes].

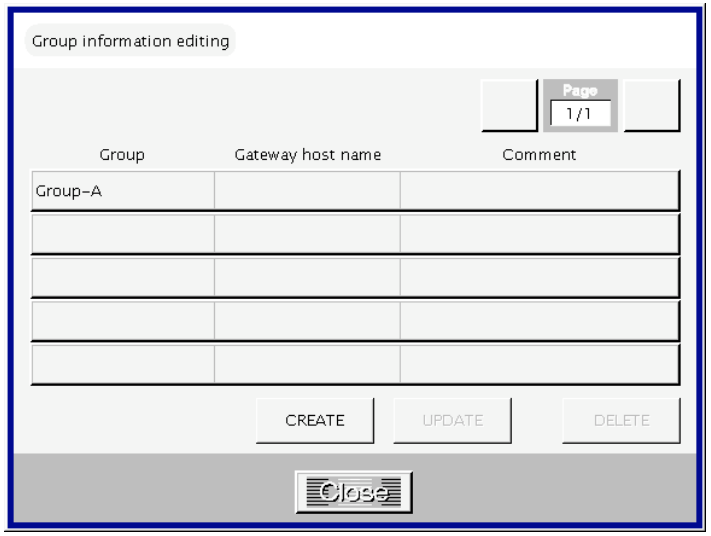
➔ The selected host information is then deleted.

■ Entering the gateway host name

Use the following procedure to enter the name of the IDT-IV host for which the IP information gateway function is to be set up.

(1) From the "Network setup" screen, touch [Group Setup].

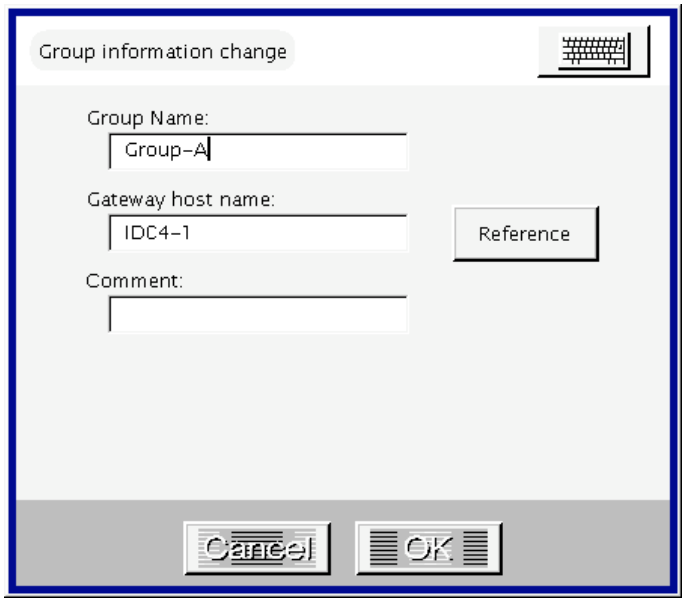
➔ The "Group information editing" screen opens.



FT100023.EPS

(2) Select the group information to be changed, and then touch [UPDATE].

➔ The “Group information change” screen opens.



FT100026.EPS

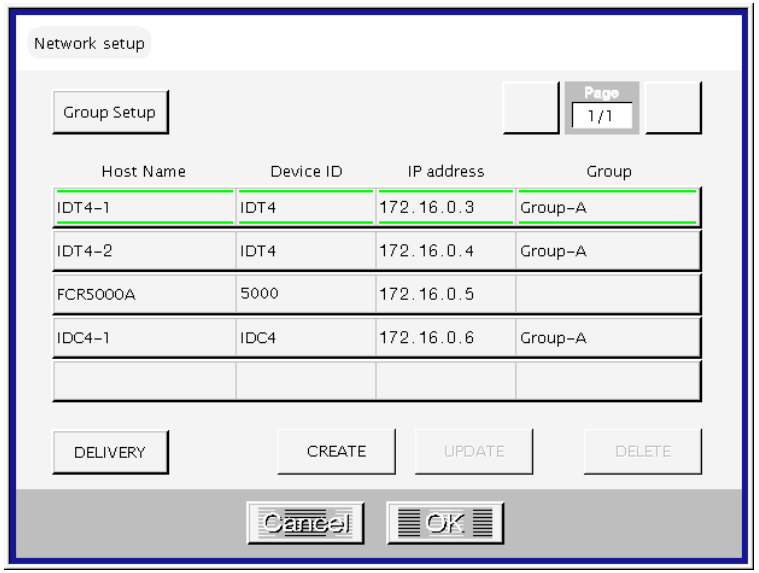
(3) Enter the gateway host name and then touch [OK].

When "Reference" is pressed, a list of the IDT-IV and IDC-IV units set in the host information will be displayed. Make your selection from this list.

➔ You are returned to the “Group information editing” screen.

(4) Touch [Close].

➔ You are returned to the “Network setup” screen.



FT100236.EPS

(5) Touch [OK].

➔ The “Distribution Incomplete” confirmation screen opens.

(6) Touch [No].

➔ You are returned to the “Maintenance process” menu screen.

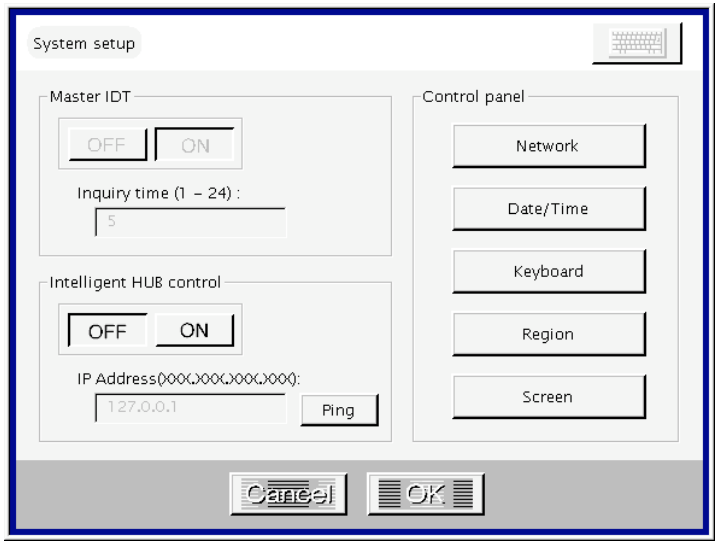
3.3.6 Setting the system

Complete the following system setup procedures. You may perform them in any order.

- Setting the inquiry time (slave IDT only)
- Setting the network
- Setting the date and time
- Setting the keyboard
- Performing regional setup
- Setting the screen saver

From the "Maintenance process" menu screen, select [System setup].

➔ The "System setup" screen opens.



FT100014.EPS

◆ ***NOTE*** ◆

On the "System setup" screen, do not set Intelligent HUB control to [ON] because this control function is not available at present.

■ Setting the inquiry time

By default, the "ON" option is selected in the "Master IDT" area (this setup is for the master IDT). You cannot switch to the "OFF" option from the "System setup" screen.

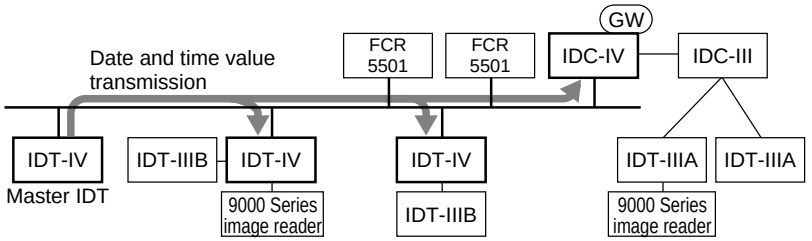
When you restart the system after the network information is distributed from the master IDT, the option is changed to "OFF" and the unit serves as a slave IDT.

◆ ***NOTE*** ◆

When establishing a network connection, be sure to set one master IDT.

For each slave unit, set up the inquiry time.

To ensure that all the networked IDT-IV units and IDC-IV units agree in date and time, the master IDT and slave IDT units are adjusted for date/time agreement at system startup and at the time selected here.



FT100003.EPS

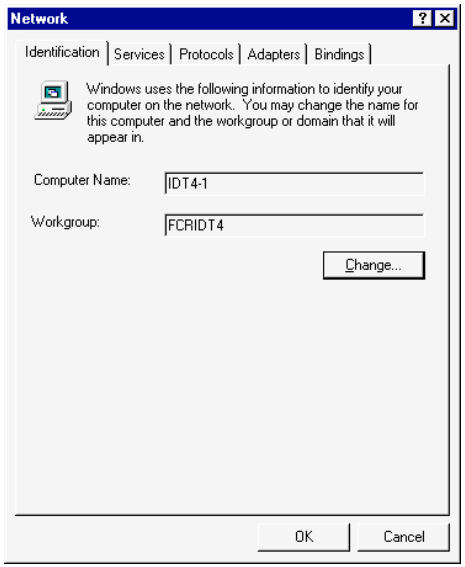
■ Setting the network

Refer to the system configuration diagram and device connection table that were created as directed in section 2.2, "System Configuration and Connection," and set up the computer name, IP address, and other network connection related information.

(1) From the "System setup" screen, touch [Network] in the Control panel area.

➔ The "Network" screen opens.

(2) Touch the [Identification] tab and then set the computer name and work group.



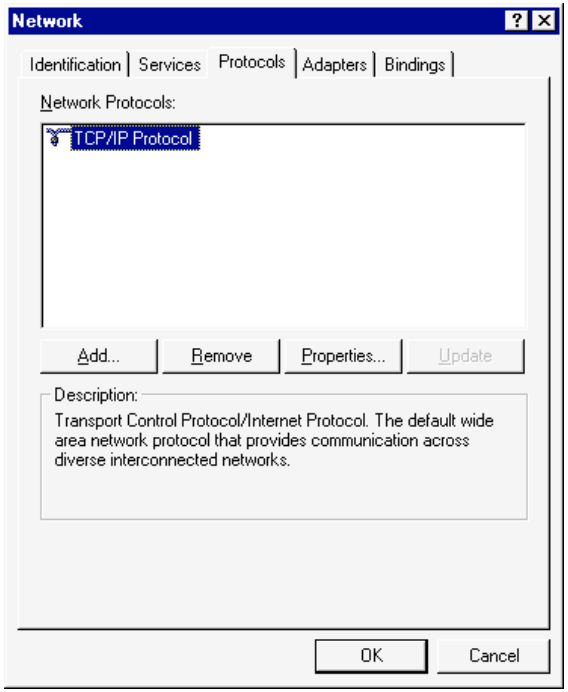
FT100015.EPS

◆ *NOTES* ◆

- *Even if you type in the lowercase character string "idt4-1", the display shows the uppercased equivalent "IDT4-1" (in compliance with the Windows NT specification). Leave such a displayed character string as is.*
- *The computer names set here are for identifying devices in the network.*
  Give each device a different computer name. The name should be the same as the host name set in 3.3.5, "Setting the network information settings."
- *The work group is the group of computers displayed, for convenience, under the same work group name when a network configuration is referred to.*
  Leave the default (FCRIDT4) as it is.

(3) Touch the [Protocols] tab.

(4) Select "TCP/IP Protocol" and then Touch [Properties...].



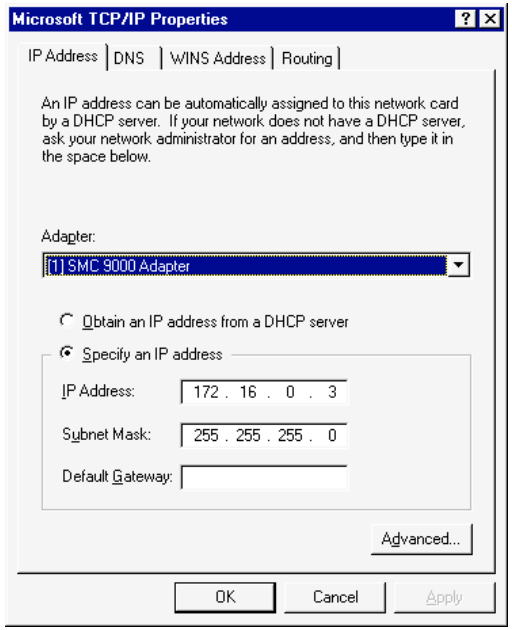
FT100016.EPS

(5) Touch the [IP Address] tab and set the IP address and subnet mask. Touch [OK].

- IP address (ex.: 172.16.03)
  Number assigned to network devices for identification purposes. Set in the format "xxx.xxx.xxx.xxx," using a number from 0 to 255 for "xxx" portions.
- Subnet mask (ex.: 255.255.255.0)
  In IP addresses, assigns "1" to bits handled as network nos. and "0" to portions handled as host numbers and is set as a decimal. Format is "xxx.xxx.xxx.xxx," using a number from 0 to 255 for "xxx" portions.
- Default gateway
  Address of router and other devices. Set as necessary.

◆ NOTE ◆

Do not select "IP Address Assigned by DHCP Server". The IDT-IV designates a fixed IP address instead of using an IP address assigned by the DHCP.


Microsoft TCP/IP Properties
IP Address
DNS
WINS Address
Routing
An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.
Adapter:
[1] SMC 9000 Adapter
Obtain an IP address from a DHCP server
Specify an IP address
IP Address:
172 . 16 . 0 . 3
Subnet Mask:
255 . 255 . 255 . 0
Default Gateway:
Advanced...
OK
Cancel
Apply

FT100017.EPS

➔ You are returned to the "System setup" screen.

■ Setting the date and time

To set the system date, time, and time zone, perform the following steps.

(1) From the "System setup" screen, touch [Date/time].

➔ The "Date/Time Properties" sheet appears.

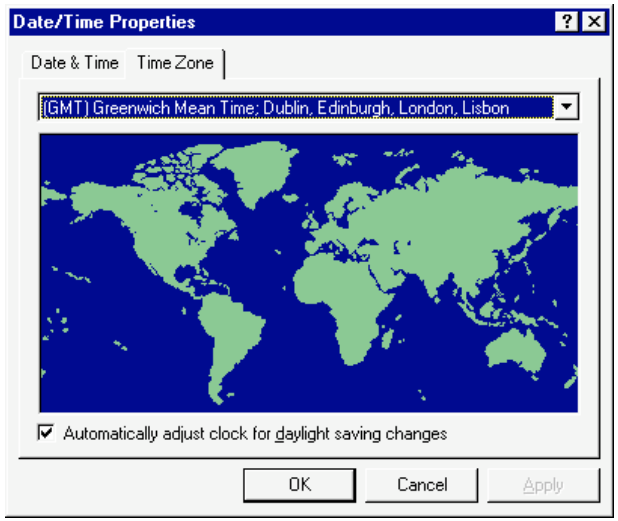
(2) From the Time Zone screen, select a time zone and touch [OK].

For units to be used in Japan, make sure that the selected time zone is for "(GMT + 09:00) Tokyo, Osaka, Sapporo, Seoul, Yakutsk".

◆ NOTE ◆

Make sure to make the time zone for all the IDT-IV and IDC-IV units in the network the same.

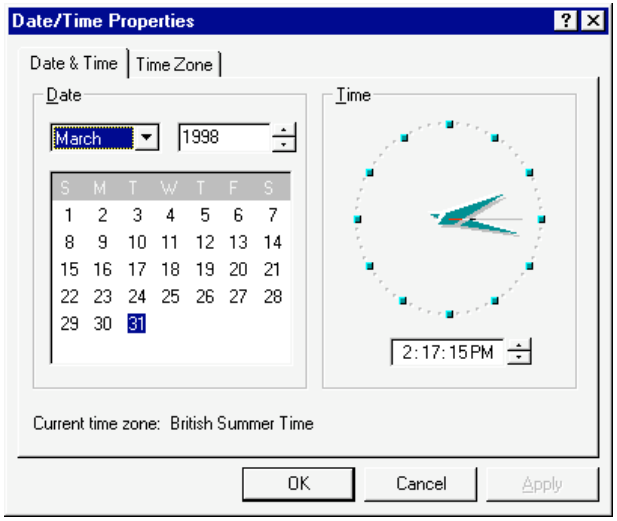
The IDT-IV and IDC-IV date/time synchronization function uses Greenwich Standard Time in the form of numerical data. For this reason, discrepancies in the time will result if the time zones for IDT-IV and IDC-IV units are different.



FT100020.EPS

(3) Switch to the “Date&Time” screen.

(4) Set the date and time.



FT100018.EPS

➔ You are returned to the “System setup” screen.

■ Setting the keyboard

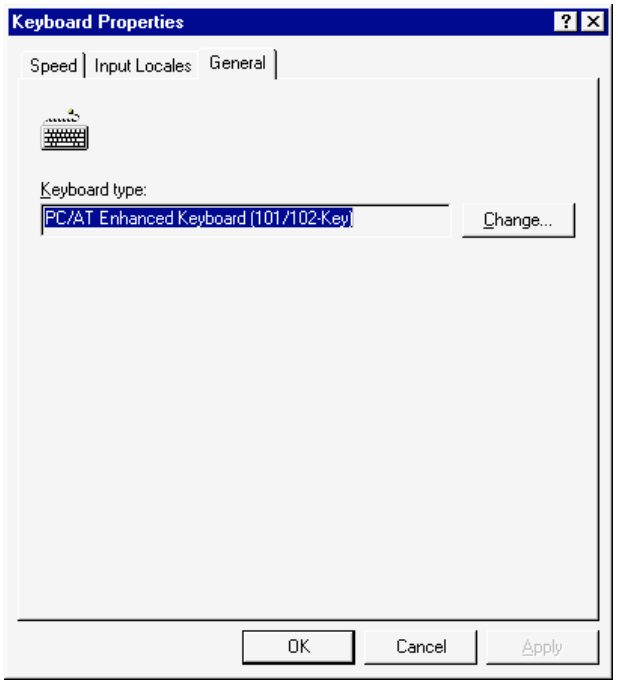
Define the keyboard type by performing the following steps.

(1) From the “System setup” screen, touch [Keyboard] in the Control panel area.

➔ The “Keyboard Properties” sheet appears.

(2) Set the keyboard type and then touch [OK].

● For English version: Ensure that “PC/AT Enhanced Keyboard (101/102-Key)” is selected.



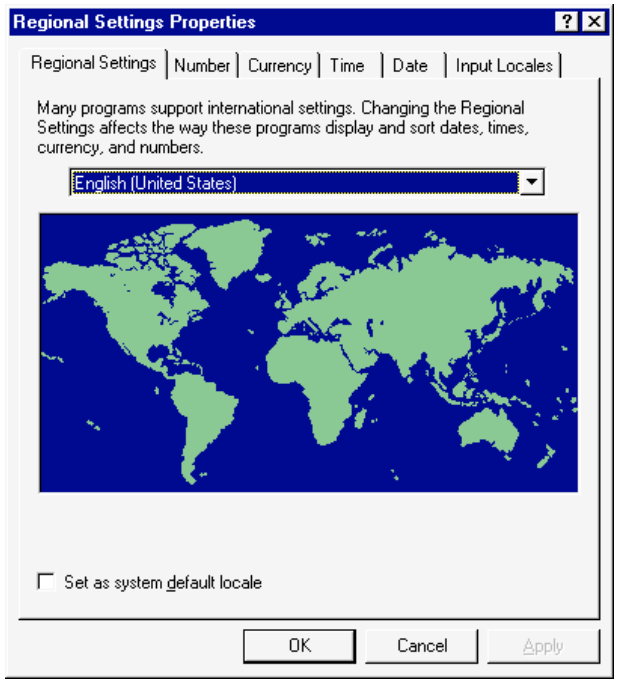
FT100019.EPS

➔ You are returned to the “System setup” screen.

■ Performing regional setup

CORRECTION: Do not change "Regional Settings."

Leave the default as it is, otherwise the Image Reader name is not input into the "Button Caption".
(Refer to 3.7.1 for the "Button Caption" entry screen.)



FT100020.EPS

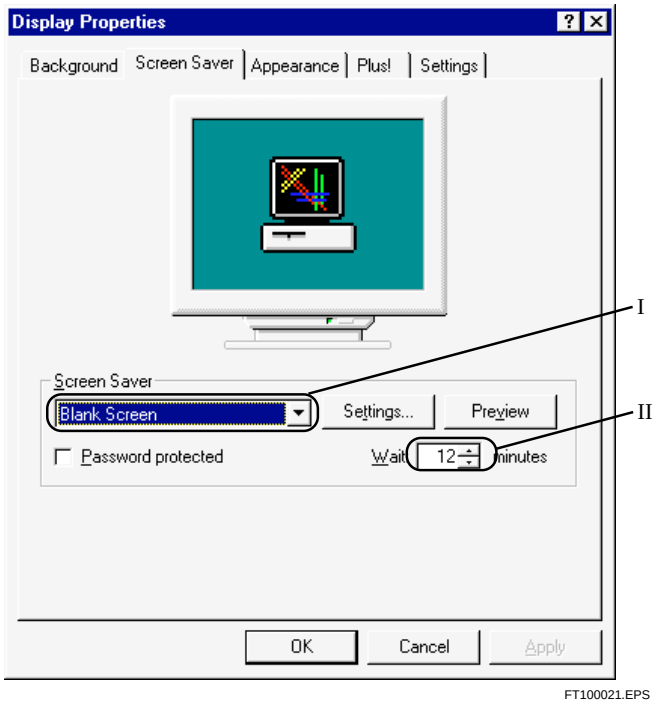
→ You are returned to the "System setup" screen.

■ Setting the screen saver

Set the screen saver as directed below to save the screen from "burnout".

(1) From the "System setup" screen, touch [Screen] in the Control panel area.

→ The "Display Properties" sheet opens.



FT100021.EPS

(2) Switch to the "Screen Saver" setup screen.

I. Make sure that "Blank Screen" is selected as the screen saver type.

II. Make sure that a screen saver wait time setting of "12 minutes" is selected.

◆ *IMPORTANT* ◆

Do not disable the screen saver. Although the BIOS provides LCD backlight ON/OFF control, the backlight OFF feature does not successfully save the LCD from "burnout".

(3) Touch [OK].

→ You are returned to the "System setup" screen.

(4) Touch [OK].

→ You are returned to the "Maintenance process" menu screen.

3.3.7 Shutting down the equipment

Shut down the equipment.

From the "Maintenance process" menu screen, turn OFF the sub-switch.

→ The computer shutdown screen opens. After a short time, the equipment shuts down.

3.4 System Setup Procedures at Slave IDT-IV

If slave IDT units are used, set up the system without connecting cables.

3.4.1 Starting the Slave IDT

◆ ***NOTE*** ◆

Do not make the network cable connection yet.

Start the slave IDT.

☞ 3.1.1, "Entering the maintenance mode"

3.4.2 Setting the System

Perform system setup.

☞ 3.3.6, "Setting the system"

3.4.3 Restarting

Restart the slave IDT as directed below.

(1) From the "Maintenance process" menu screen, turn OFF the sub-switch.

→ The computer shutdown screen opens. After a short time, the equipment shuts down.

(2) Make the network cable connection to each slave IDT unit.

(3) Press the sub-switch to start the equipment.

→ An error occurs during application startup, causing the application to quit.

Leave it as is.

3.5 Delivering the Setup Data

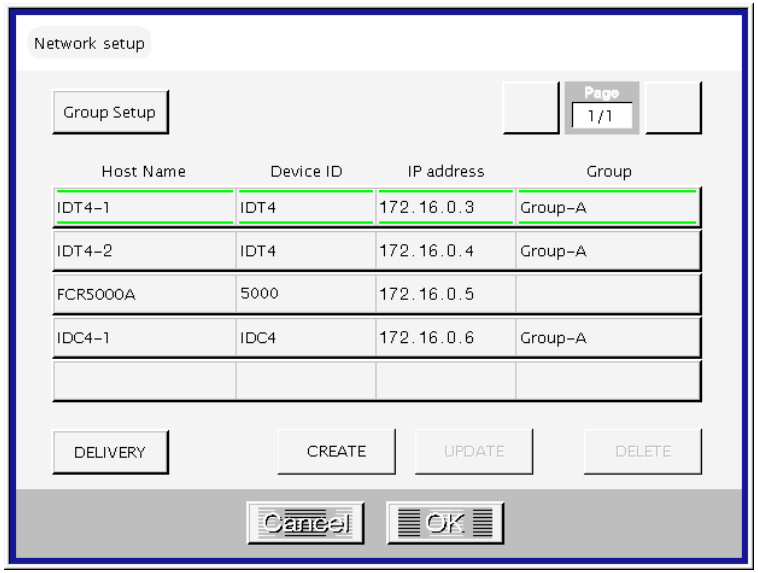
Perform the following procedure to deliver the network information from the master IDT to slave IDT units.

(1) Start the maintenance mode at the master IDT unit.

➔ The maintenance mode starts.

(2) When the "Maintenance process" menu screen opens, select [Network setup].

➔ The "Network setup" screen opens.



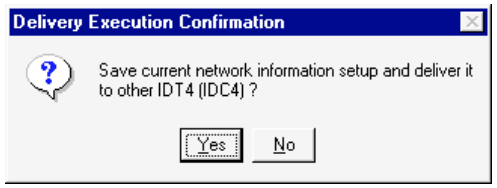
FT100234.EPS

(3) Touch [DELIVERY].

➔ The delivery execution confirmation screen opens.

(4) Touch [Yes].

➔ The network information is then delivered to the slave IDT units. When delivery is completed, the "Process completion" confirmation screen opens.



FT100283.EPS

(5) Touch [OK].

➔ The system returns you to the "Network setup" screen.

3.6 Restarting the Slave IDT

Restart all the slave IDT units by turning the sub-switch OFF and then back ON.

➔ The maintenance mode starts.

3.7 Setting the Master IDT

Perform the maintenance mode setup procedures at the master IDT as directed below.

3.7.1 Setting the hookup devices

Complete the following setup procedures. You may perform them in any order.

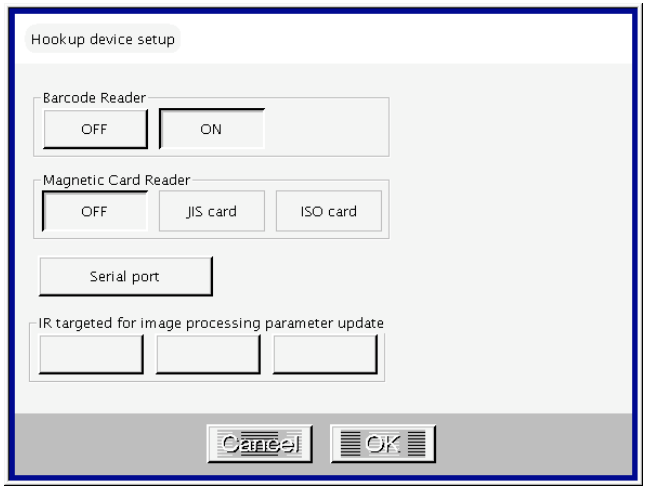
- Setting the device to be serially connected
- Setting the image reader to be targeted for image processing parameter editing

◆ *NOTE* ◆

The magnetic card reader is automatically set up.

From the “Maintenance process” menu screen, select [Hookup device setup].

➔ The “Hookup device setup” screen opens.



FT100027.EPS

■ Setting the device to be serially connected

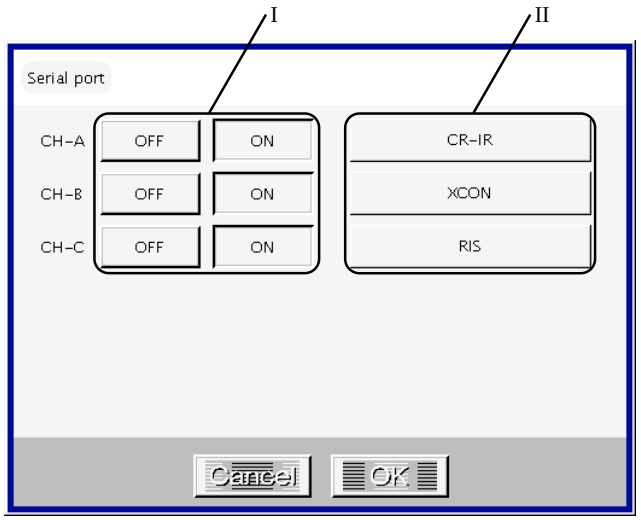
When making a serial connection, perform the following steps to specify the channel to be used for the connection and the device to be connected.

◆ *NOTE* ◆

When connecting to RIS, make settings via the screen in 4.1 "Setting the Patient Information Online Function."
RIS cannot be selected from this screen.

(1) From the “Hookup device setup” screen, touch [Serial port].

➔ The “Serial port” screen opens.



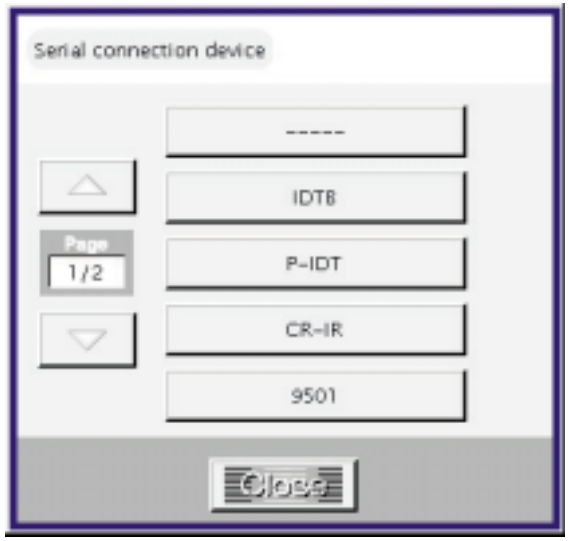
FT100028.EPS

I. Select the channel to be used for the connection, and then select [ON].

II. Touch the button for hookup device selection.

➔ A list of connectable devices appears.

Select the device to be connected.



FT100285.EPS

* P-IDT is not available and is available only in Japan.

➔ You are returned to the “Serial port” screen.

(2) Touch [OK].

➔ You are returned to the “Hookup device setup”s screen.

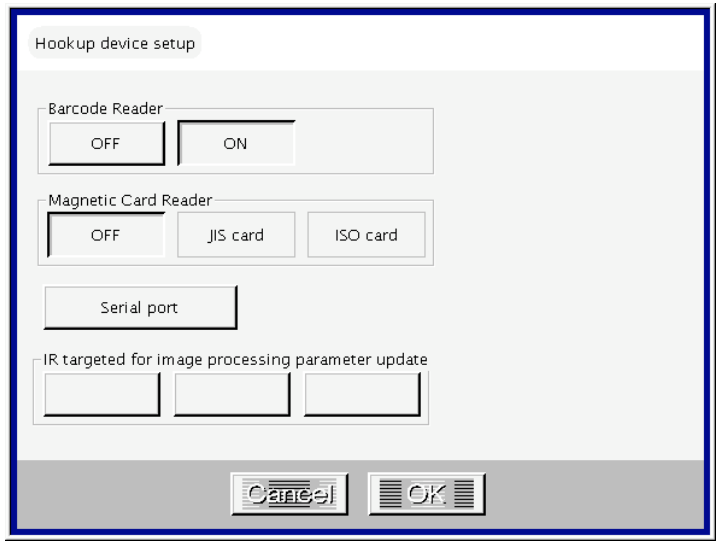
■ Setting the image reader to be targeted for image processing parameter editing

Use the following procedure to make a connection mode selection, select the image reader to be targeted for image processing parameter editing, and set the image reader parameter information.

When making settings for 9000 series, AC-3/AC-3 CS series and 9501/2 series image readers, first make the settings under '■ Setting the device to be connected serially."

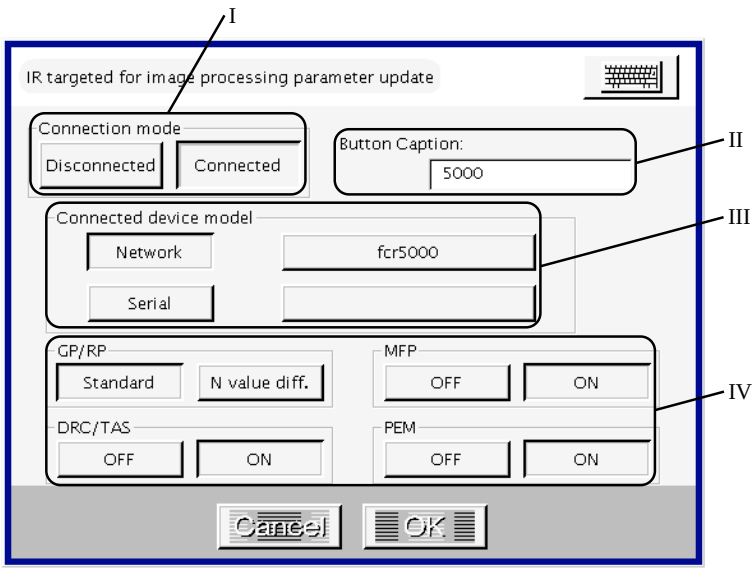
When making settings for 5000/R and 5501 image readers, first register the image readers in the host information as specified in 3.3.5 "Setting the network information."

(1) From the “Hookup device setup” screen, touch a button in the “IR targeted for image processing parameter update” column.



FT100027.EPS

➔ The “IR targeted for image processing parameter update” screen opens.



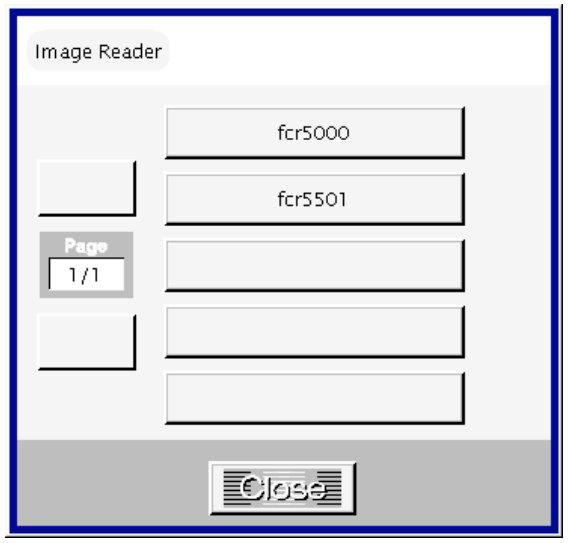
FT100029.EPS

I. Select a connection mode.
[Disconnected]: Proceed to perform steps (2) and beyond.
[Connected]: Perform steps II and beyond.

II. Enter the name of the button to be used for "Image Processing Parameter Update" in the service mode.
Make sure to set this item. Failure to do so will generate an error.

III. Select the [Network] or [Serial] connection type.
- If [Network] is chosen, touch the button that indicates a device name.
  ➔ The "Image reader selection" screen opens.

  Host name specified in "3.3.5 Setting the network information, ■ Setting the host information" will appear on the "Image reader selection" screen. Select an image reader that manages image processing parameters.



FT100284.EPS

  ➔ You are returned to the "IR targeted for image processing parameter update" screen.
- If [Serial] is chosen, the right-hand button indicates the device name that was set in the "■ Setting the device to be serially connected" process.

IV. Set up the parameters.
- GR/RP
  These image processing parameters pertain to gradation/frequency processing. Sets the type of parameter.
- DRC/TAS
  These image processing parameters pertain to DR compression filter / DR compression processing.
  Sets to [ON] for the 5000/R and 5501.
- MFP
  These image processing parameters are to enable enhancement processing with artifact suppression or dynamic range compression.
  Sets to [OFF] for 9000 series image readers.
- PEM
  These image processing parameters are for granularity suppression and sharpness enhancement processing exclusively for mammography.
  Set to [OFF] for 9000 series image readers.

(2) Touch [OK].

➔ You are returned to the “Hookup device setup” screen.

(3) Touch [OK].

➔ You are returned to the “Maintenance process” menu screen.

3.7.2 Setting the barcode type

A barcode other than the IP barcode (NW7 type) can be used. To read a barcode different from the IP barcode, it is necessary to register in the IDT-IV the barcode type and the format of data to be read. Use the following procedure.

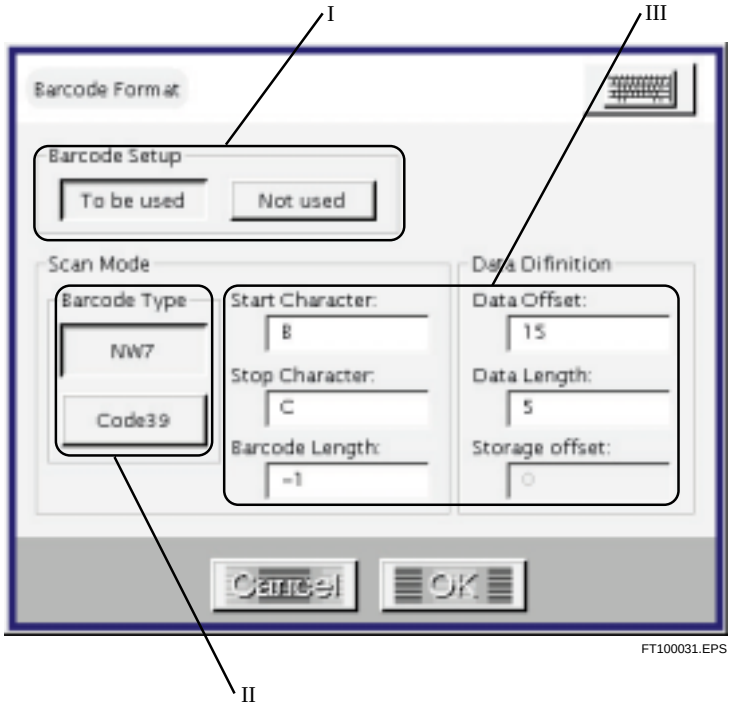
(1) From the “Maintenance process” menu screen, select [Barcode setup].

➔ The “Barcode setup” screen opens.

FT100030.EPS

(2) Select the “Inquiry Key” and then touch [UPDATE].

➔ The “Barcode Format” screen opens.



FT100031.EPS

I. Select whether or not to use barcode setup.
[Use] : Perform step II thereafter.
[Not use] : Perform step (3) thereafter.

II. Select a bardoce type.

III. Enter the values of the barcode data to be read.

(3) Touch [OK].

➔ The system changes the barcode format and returns you to the “Barcode setup” screen,

(4) Touch [Close].

➔ You are returned to the “Maintenance process” menu screen.

3.7.3 Setting the magnetic card

This section describes the following magnetic card setup procedures. You must perform the procedures in the order indicated below.

- Setting the magnetic card type
- Defining the magnetic card format

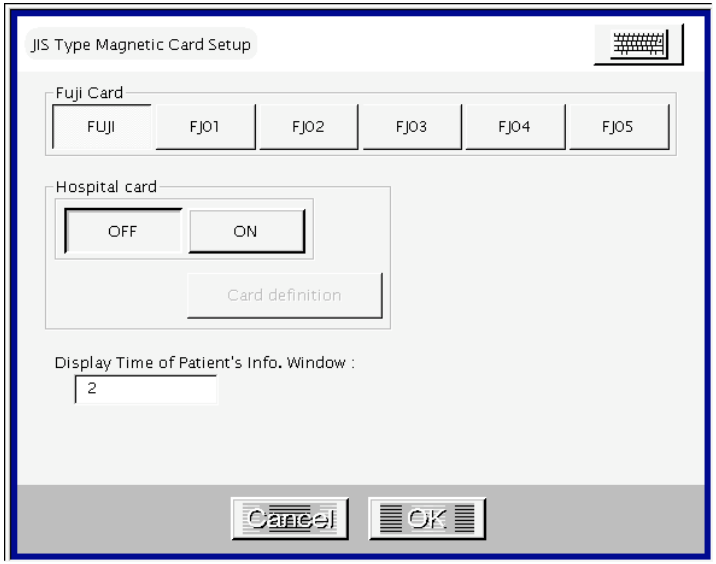
For the Display Time of Patient's Info. Window (display time of patient information read from magnetic cards), the default may be left as it is.

From the "Maintenance process" menu screen, select [Magnetic card setup].

➔ The "Magnetic card setup" screen opens.

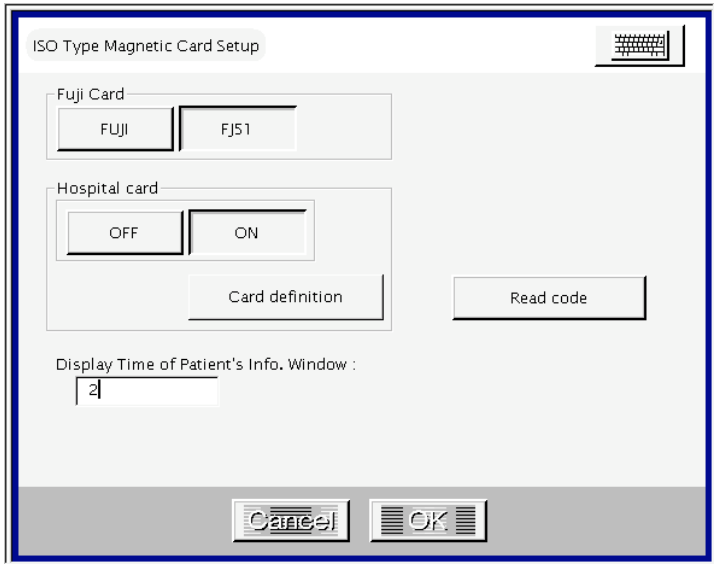
The contents of this screen vary with the connected magnetic card reader type.

● JIS card type



FT100032.EPS

● ISO card type



FT100033.EPS

■ Setting the magnetic card type

◆ ***NOTE*** ◆

If the card having a recorded system code of "FUJI" is not in the Fuji standard format, select a Fuji card type between FJ01 and FJ04.

Use the following procedure to set the type of the magnetic card to be used.

(1) Select a Fuji card type.

☞ "Appendix 1, ID Card Data Format"

(2) Specify whether or not to use a hospital card in addition to the Fuji card.

When using a hospital card, complete the procedure set forth under "■ Defining the magnetic card format".

■ Defining the magnetic card format

◆ *NOTE* ◆

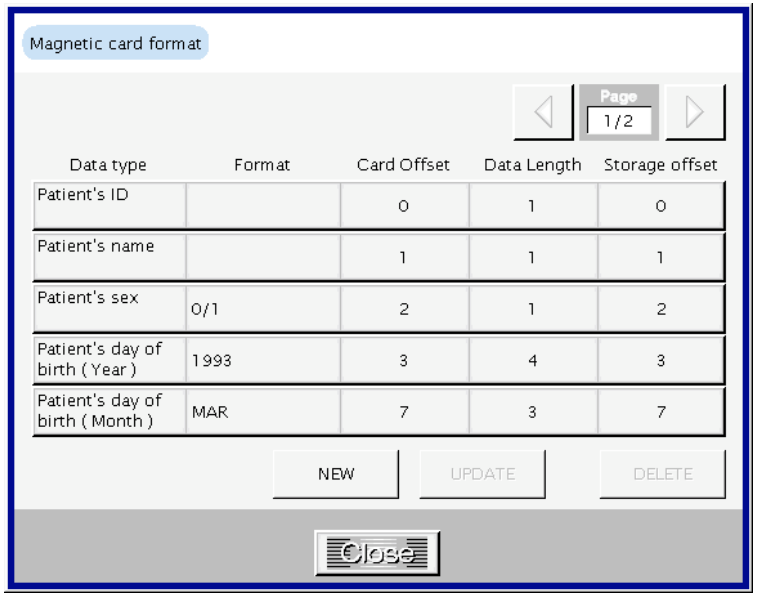
If the card having a recorded system code of "FUJI" is not in the Fuji standard format, set the hospital card format.

When using a hospital card, define its format by performing the data type change/addition/deletion procedure.

☞ "Appendix 1, ID Card Data Format"

From the "Magnetic card setup" screen, touch [Card definition].

➔ The "Magnetic card format" screen opens.



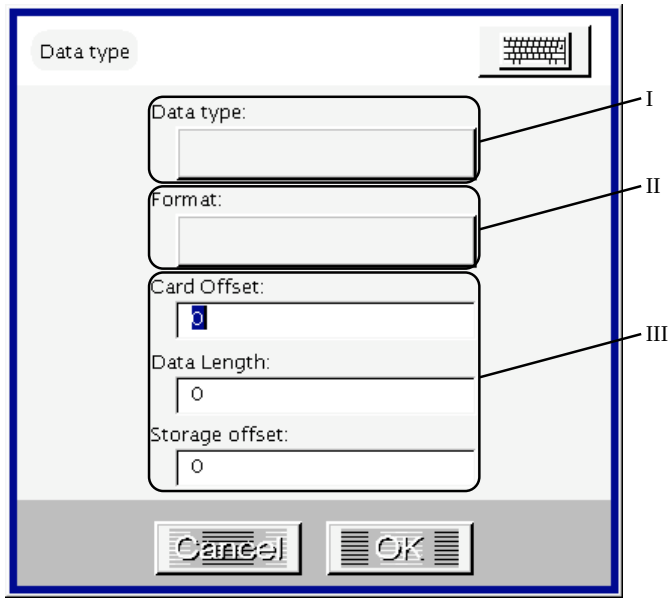
FT100034.EPS

● Changing or adding a data type

(1) To change: Select the target data type from the "Magnetic card format" screen and touch [UPDATE].

To add: Touch [NEW] from the "Magnetic card format" screen.

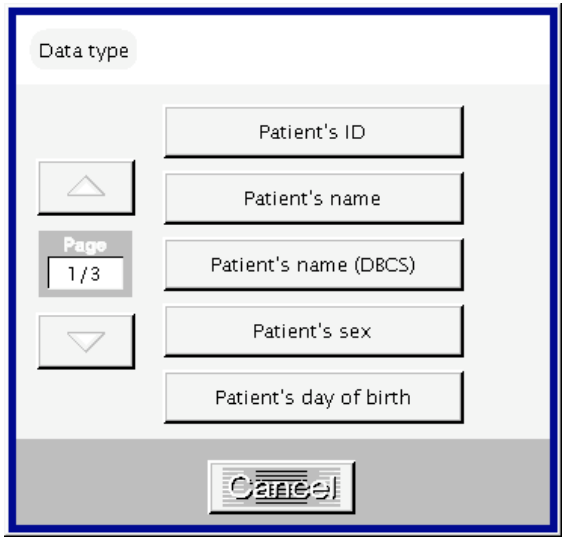
➔ The "Data type" screen opens.



FT100035.EPS

I. Touch the Data type button.
➔ The “Data type selection” screen opens.

Select the data type be set up.



FT100286.EPS

➔ You are returned to the “Data field setup” screen.

II. Touch the Format button.

When “Patient’s sex”, “Patient’s day of birth” or “year or month of Patient’s day of birth” is selected, select the format from the ones available. For other types of data, proceed to step III.
➔ The data type format screen will be displayed.

When “Patient’s sex”, “Patient’s day of birth” or “year or month of Patient’s day of birth” is selected, select the format that you wish to set from the ones available.
➔ You are returned to the “Data field setup” screen.

III. Enter the card offset, data length, and storage offset values.

- Card offset
  Sets the data start position on the card. Set the position after "STX" (with a FUJI card, it will be the letter "F") to 0. Do not set "SI/SO" or "Kanji IN/OUT" code portions as starting points.
- Data length
  Sets the length of data to be read in terms of the number of letters from the card offset position.
  Do not include "SI/SO" or "Kanji IN/OUT" code portions in data length.

  For kanji data, set an even number for data length.
  Data lengths for patient ID nos., reception nos. and examination nos. should not exceed the valid number of digits set in 3.7.6 "Setting the data formats."

  Excesses will result in errors. If the valid number of digits is not satisfied, the padding process set in 3.7.6 "Setting the data formats," will be conducted.
- Storage offset
  Sets the storage position for read data.
  For example, if "2" is set, 2 spaces will be added to the front of the data when it is stored.
  Normally, "0" is sufficient.

The card offset and data length values cannot be set up for some data types.

(2) Touch [OK].

➔ When the setup is correct :
The system applies the specified data type change or addition, and returns you to the “Magnetic card format” screen.

When the setup is not correct :
An error message appears. In this instance, touch [OK] and repeat steps I and beyond.

(3) Touch [Close].

➔ You are returned to the “Magnetic card setup” screen.

● Deleting a data type

(1) While the "Magnetic card format" screen is displayed, select the data type to be deleted.

(2) Touch [DELETE].

➔ The confirmation message box opens.

(3) Touch [Yes].

➔ The selected data type is then deleted.

(4) Touch [Cancel].

➔ You are returned to the "Magnetic card setup" screen.

■ Defining the ISO card read character code

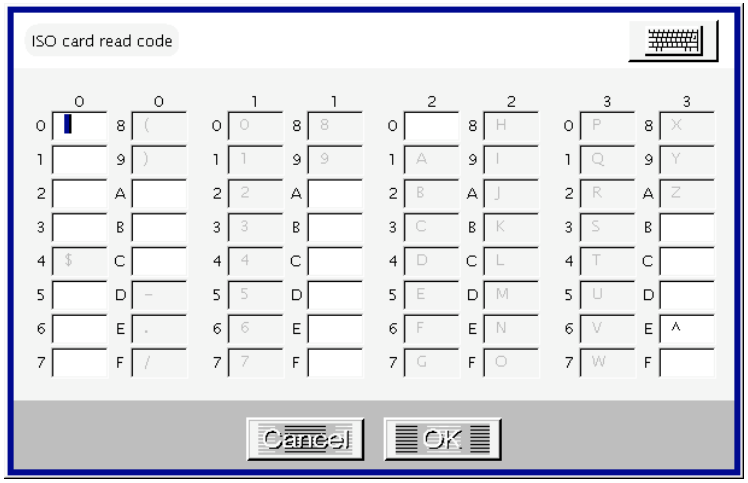
If the connected magnetic card reader is of an ISO type, formulate a character code definition as directed below. If any other type of magnetic card reader is connected, skip to the next section.

For character code definition, use a full-sized keyboard.

(1) From the "Magnetic card setup" screen, touch [Read code].

➔ The "ISO card read code" screen opens.

(2) Move the cursor to an undefined code position (blank), and with a full-sized keyboard, enter a specific language special code in the undefined position of ISO7811 6-bit definition.



FT100036.EPS

◆ ***NOTE*** ◆

To delete an entered character, place the cursor over it and then press the space bar.

(3) Touch [OK].

➔ You are returned to the "Magnetic card setup" screen.

(4) Touch [Close].

➔ You are returned to the "Maintenance process" menu screen.

3.7.4 Setting the selector

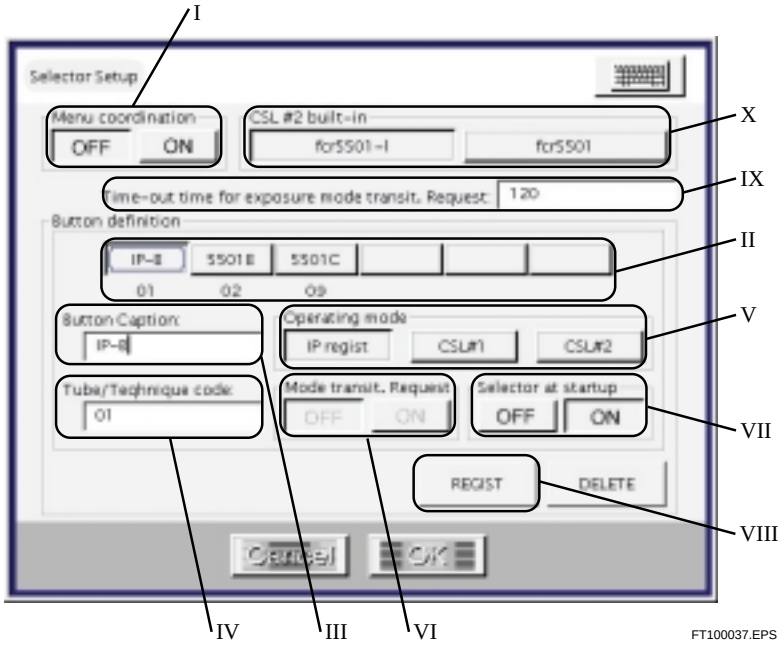
Set when using multiple processing modes (IP registration processing mode and console processing mode).

Perform the following procedure to specify whether or not to coordinate the selector with an exposure menu selection and define the selector buttons at the bottom of the routine mode screen.

The selector buttons are used to change the mode or effect X-ray tube/technique code changeover for X-ray exposure condition data transmission to the XCON.

(1) From the "Maintenance process" menu screen, select [Selector setup].

➔ The "Selector setup" screen opens.



FT100037.EPS

I. Turn [ON] or [OFF] the "Menu Coordination" feature. To effect processing mode changeover in coordination with an exposure menu selection, touch [ON].

II. Select a selector button to define.

III. Input a name of up to 5 letters for the selector button. This will be the "Button Caption."
Make sure to set this item. Failure to do so will generate an error.

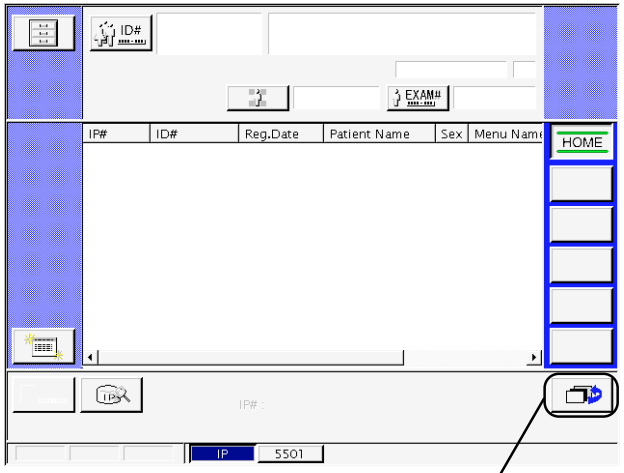
IV. For the "Tube/Technique code," input a different code for each selector button.

V. Select the Operating mode.

VI. Set the "Mode transit. Request" when using the IDT-IV as the console.

After setting the Operating mode to [CSL#1] or [CSL#2], set whether to use the IP button at time of cassette exposure. If [ON] is selected, operations like the following will be conducted in routine mode (normal operating mode).

- The IP eject button will be displayed on the cassette registration screen.
  When the IP withdrawal button is pressed, the IP from the corresponding built-in device will be ejected from its exposure position.
- When a selector button that has been set to [ON] is selected, the IP from the corresponding built-in device will be moved to its exposure position.



FT100288.EPS

VII. Set the startup selector: the selector button that will be displayed on the HOME screen that appears after the IDT-IV has started up.

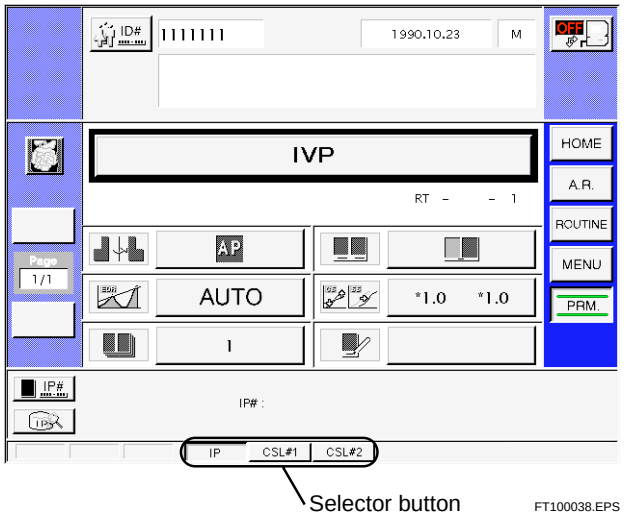
VIII. Press [REGIST]. If selections are not registered, the settings made in steps II to VI will not be valid.

IX. As the time-out time for exposure mode transit. Request, when the setting described in "VI" is set to [ON], set the length of the time-out for IP withdrawal (cassette exposure mode transition) and IP setting (built-in exposure mode transition) requests.
Leave the default (120 sec.) as it is.

X. Select the second FCR5501 when using the IDT-IV as a console for two units of the FCR5501.

This item appears when the two FCR5501 units that manage image processing parameters have been set in "3.7.1 Setting the hookup devices, ■ Setting the image reader to be targeted for image processing parameter reading."
The FCR5501 host name will be displayed here.

Selector buttons and the IP withdrawal button are shown below.



If there is only one selector button (ex.: IP only), it will not be displayed.

(2) Touch [OK].

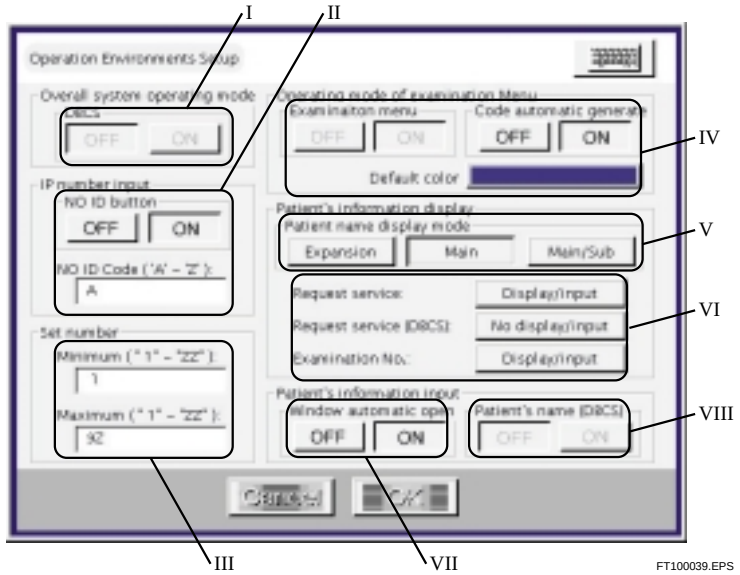
➔ You are returned to the "Maintenance process" menu screen.

3.7.5 Setting the operating environment

Use the following procedure to set up the overall equipment operating mode and patient information display/input mode and enter other operating environment setup data.

(1) From the "Maintenance process" menu screen, select [Operation environments setup].

➔ The "Operation environments setup" screen opens.



I. Because this setup is effective only under Japanese environments, leave this column OFF.
(DBCS: Double Byte Character System dedicated for Japanese kanji characters)

II. Because this setup is effective only for Japanese magazine-type image reader, leave this column OFF.

◆ NOTE ◆

The character entered here is used as the X portion of "NO ID X" which appears to indicate the IP number when the IP barcode cannot be read by a magazine-type image reader.

III. With the items input for Set number, set the range of group numbers used. Make sure to set the range of group numbers so that it is not duplicated by another IDT-IV in the same network.
Normally, the default can be left as it is.

IV. Set the operating mode of examination Menu.
Set "Examination menu" to [ON] if using an examination menu.
Setting "Examination menu" to [ON] also makes it possible to use the extension menu (to register multiple menus under one MPM code).
If "Examination menu" has been set to [ON], set whether to automatically have menu codes generated and the color of the menu's letters.

◆ NOTE ◆

Normally, "Code automatic generate" is set to [OFF].
When it is set to [ON], if one IDT-IV is operating alone, it will automatically generate extension menu codes when menus are created. However, if an ID is shared by multiple IDT-IVs, it will be necessary to register the same examination menu code at each IDT. In keeping, inputting in a mode that does not automatically generate these codes is safer.

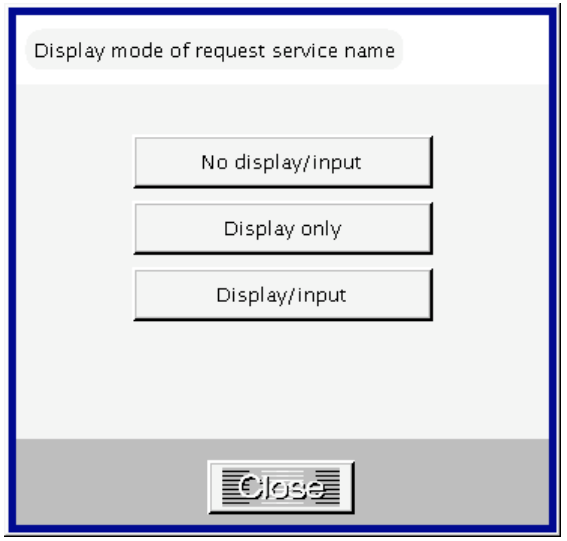
If printing frontal and lateral images on film when using an IDT-IV as the console for the 9501/2, set "Examination menu" to [ON], as this is the only place where frontal and lateral double-image output can be specified.

V. Set the patient name display mode for the patient information display.
Select [Expansion] when expanding the number of characters to be displayed.
Select [Main]. The [Main/Sub] setup is effective only for Japanese.
[Main] will be automatically selected if the full name in kanji from step I is selected with the kanji menu input [OFF].

VI. Press the button to the right of "Request service," "Request service DBCS," and "Examination no."

→ The "Display mode of request service name" screen will be displayed.

Select the display and input settings.



FT100287.EPS

→ Return to the "Operation environments setup" screen.

VII. Set the automatic opening of the patient information input window.
Set whether to have the patient ID information input screen automatically opened from routine mode's HOME page.

VIII. Set kanji name input for patient information input.
Select whether to use kanji or not for name input.
[OFF] will automatically be selected when the kanji name from step I is selected with kanji menu input [OFF].

(2) Touch [OK].

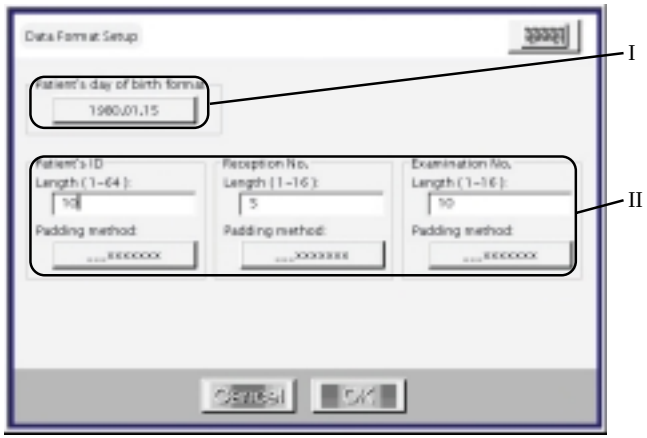
→ You are returned to the "Maintenance process" menu screen.

3.7.6 Setting the data formats

Define the birth date and other data formats as directed below.

(1) From the “Maintenance process” menu screen, select [Data format setup].

➔ The “Data format setup” screen opens.



FT100183.EPS

I. Specify the birth date display/input format.

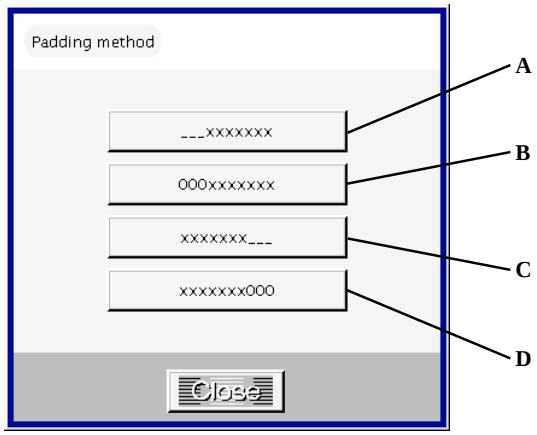
Format type is indicated below.

- 1980.01.15: ANSI short date
- 1980.JAN.15: ANSI long date
- 01.15.1980: AMERICAN short date
- JAN.15.1980: AMERICAN long date
- 15.01.1980: EUROPEAN short date
- 15.JAN.1980: EUROPEAN long date
- S55.01.15: JAPANESE date
- 19800115: ANSI short date (No separator)
- 1980JAN15: ANSI long date (No separator)
- 01151980: AMERICAN short date (No separator)
- JAN151980: AMERICAN long date (No separator)
- 15011980: EUROPEAN short date (No separator)
- 15JAN1980: EUROPEAN long date (No separator)
- S550115: JAPANESE date (No separator)
- 800115: ANSI short special
- 3550115: JAPANESE short special date (No separator)
- S.55.01.15: JAPANESE short special date

II. Specify the ID number, reception number, and examination number formats. To do this, you must key in the character string length and then touch the padding method button.

➔ The “Padding method” screen opens.

Select a padding method.



FT100228.EPS

A Pad the data to the right, filling the blank digits with space codes.

B Pad the data to the right, filling the blank digits with zeros.

C Pad the data to the left, filling the blank digits with space codes.

D Pad the data to the left, filling the blank digits with zeros.

➔ You are returned to the “Data format setup” screen.

(2) Touch [OK].

➔ You are returned to the “Maintenance process” menu screen.

3.7.7 Setting the interface data

Presented herein are descriptions and setup procedures for issuing the Study information and these descriptions and procedures are available in common with the IDC-IV (ID-T742).

■ Study Instance UID

The Study Instance UID is set up when diagnosing FCR images grouped into one "Study." Study Instance UID setups will differ depending on the system operating conditions from hospital to hospital.

The Study Instance UID can be issued using the following machines.
RIS, IDT-IV, Image Reader, QA-WS, HI-C655 or DICOM-GW

◆ *NOTE* ◆

Issuing STUDY Instance UIDs individually for each machine will cause the same Study (image) to be issued as different Studies (images) depending on the machine. It is thus important to

- *Issue the same Study Instance UID for the same machine type, and*
- *Issue it according to the same logic when issuing separately by different machines.*

● Main UID issue types in the Fuji system

Listed below are the main UID issue types used in the Fuji system and machine configurations available for those types.

Type	UID Issue Type	System Configuration Available
1. Issued by the RIS.	Depends on the RIS.	When the Study UID information issued by the IDT-IV is transmitted to the DICOM image generator. * Ref. (IDT-IV → FCR5000 → QA-WS)
2. Issued using the image information.	Delimits the Study unit using the image information. The following types are available. Type 1 Exam# Type 2 Exam#+ExamDate +Modality Type 3 PatientID+ExamDate +Modality Type 4 PatientID+ExamDate +DepartmentName (Restrictions apply to Type 4 due to UID data length.)	No particular restrictions apply if the information used is available for all UID issuing devices. However, when searching the ODF613 via DICOM-GW, only Type 3 is available.
3. Issued using the Order# (IDT-IV)	Delimits the Study unit using the image information. The following types are available. Type 5 Order# Type 6 Order#+ExamDate	When the Study UID information issued by the IDT-IV is transmitted to the DICOM image generator. See *Ref. below.
4. Issued by the IDT-IV according to the unit of IP registration.	The Study unit will be the continuous range of IP registration of the same patient by the IDT-IV.	Same as above.
5. Issued on one-study/ one-image basis.	Issued based on the FINP image UID. The image UIDs will be issued also for E-i/f input images in accordance with the UID issuance logic, using the FINP image UID, based on which the Study UID will be issued. One-study/one-image basis is adopted.	When neither of Types 1. to 4. can be used or when these Types can be used basically even though information cannot be obtained exceptionally for some reason.

* Ref.
- The following interfaces cannot use the STUDYInstanceUID information.
  - IDT–FCR5000 serial interface
  - E-series interface
- The DICOM interface can use the STUDYInstanceUID information.
- For whether other interfaces can use the STUDYInstanceUID or not, it depends on the equipment and/or software version, requiring thus confirmation for each interface.

TT100010.EPS

■ Issuing the UID using the image information

The data size for the STUDYInstanceUID is limited to 64 characters. Because of such limit, restrictions apply to the UID issue type using the image information.

● UID issue type

The following six types are available. The examination is grouped according to the information (Exam#, PatientID, ExamDate, etc.) used for issuing the UID.

❍ UID issue using the image information

Type 1 : <Organization Route> <Instance Identifier> 1 <Exam#'>
Type 2 : <Organization Route> <Instance Identifier> 2 <ExamDate + Modality>. <Exam#'>
Type 3 : <Organization Route> <Instance Identifier> 3 <ExamDate + Modality> <Patient ID'>
Type 4 : <Organization Route> <Instance Identifier> 4 <ExamDate> < PatientID> <DepartmentName>

❍ UID issue using the Order# (available only for the IDT)

Type 5 : <Organization Route> <Instance Identifier> 5 <Order#>
Type 6 : <Organization Route> <Instance Identifier> 6 <ExamDate> <Order#>

● Usage conditions and restrictions for each UID issue type

Basic restrictions applied to each UID issue type

Type	Usage Conditions	Restrictions
1	When the Exam# is issued absolutely uniquely not being restricted by the ExamDate.	–
2	The Exam# is issued uniquely on the day. The Exam# can be the same for the Modality.	The STUDY will be split into two if the ExamDate is not just one because exposure extends over 0:00AM.
3	When there are no Accession Numbers, Exam# information or DepartmentName.	• All exposure done on the same day using the same Modality will be registered as the same STUDY. • The STUDY will be split into two if the ExamDate is not just one because exposure extends over 0:00AM.
4	When the DepartmentName information is available although no Accession Numbers or Exam#information.	• All exposure done on the same day by the same Department will be registered as the same STUDY. Particularly, a multiple number of CR/MF images generated on the same day as requested by the same Department will be registered as the same STUDY. • The STUDY will be split into two if the ExamDate is not just one because exposure extends over 0:00AM.
5	When the Accession Number is issued absolutely uniquely with no restrictions applied.	• The Order# basically consists of ten digits or more and the information can be transmitted only when the IDT-IV is connected via networks. For this reason, this type can be used only when the IDT-IV can fully issue all UIDs.
6	The Accession Number is issued uniquely on the day.	• The Order# basically consists of ten digits or more and the information can be transmitted only when the IDT-IV is connected via networks. For this reason, this type can be used only when the IDT-IV can fully issue all UIDs. • The STUDY will be split into two if the ExamDate is not just one because exposure extends over 0:00AM.

TT100011.EPS

● Restrictions that apply depending on the data conversion type

The number of characters used for the UID is limited to 64. Restrictions apply depending on the data size and/or data conversion system. Applicable restrictions are as follows.

❍ Restrictions of the number of characters

Restrictions will not apply if the number of characters fall within the range shown in the table below.

However, in some cases, the number of characters exceeding the limits shown in the table below can be used if the logic of UID issue by the hospital can be determined, considering the logic of UID issue described separately.

Type	Examination Number	Accession Number	Patient ID	Department Name
1	18 characters (39 when consisting only of numbers)	–	–	–
2	12 characters (26 when consisting only of numbers)	–	–	–
3	–	–	12 characters (26 when consisting only of numbers)	–
4	–	–	• 12 characters not including the letters, when the department name consists of 8 characters. Each time one letter is included, the total number of characters will decrease by one. • Each time the number of characters of the department name decreases by one, two numbers or one letter can be increased to the total number of characters.	8 characters
5	–	18 characters (39 when consisting only of numbers)	–	–
6	–	14 characters (30 when consisting only of numbers)	–	–

Note: The limit numbers of characters listed in the table above are larger than those applied in the current Fuji system.
Basically, the limit numbers of characters used in the Fuji system apply.
However, if complete information can be transmitted to the UID issuing devices, the limits to be applied will be as listed in the table above.

TT100012.EPS

❍ Other restrictions

The following restrictions apply to all information used.

- The limits listed in the table above do not apply to information that includes 8-bit characters, such as half-size Kana characters.
- Because spaces before and after characters are disregarded, this table does not apply if each space has its own specific meaning.

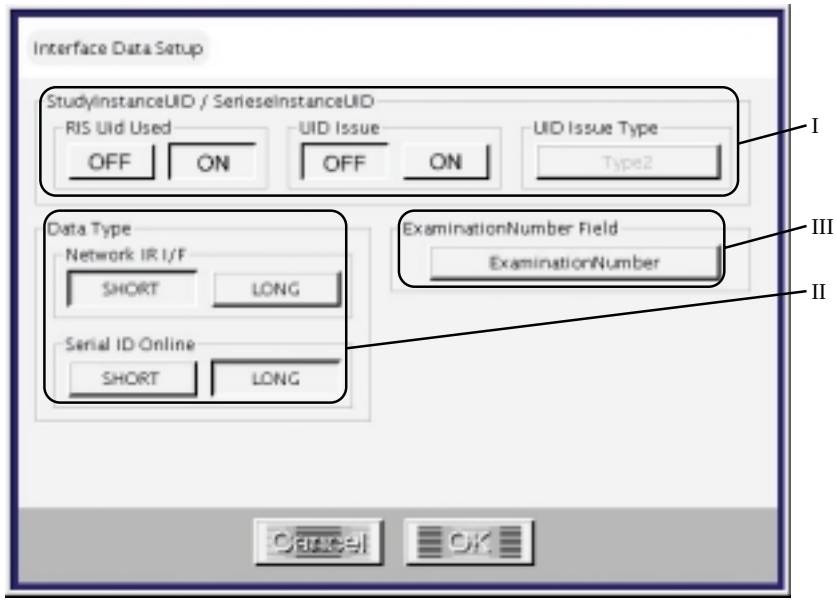
The following restrictions additionally apply to the Type4 Patient ID.

- Symbols shall simply indicate delimitation.
- For all patient IDs, the number of figures delimited by one symbol or letter shall be the same completely or the same except for one figure. If one or more letters come continuously, the number of figures between them shall be considered 0.
- The positional relationship between symbols and letters shall be the same for all patients IDs. (The order is the same.)

■ Setup procedures

(1) Touch [Interface Data Setup] on the “Maintenance process” menu screen.

➔ The “Interface Data Setup” screen opens.

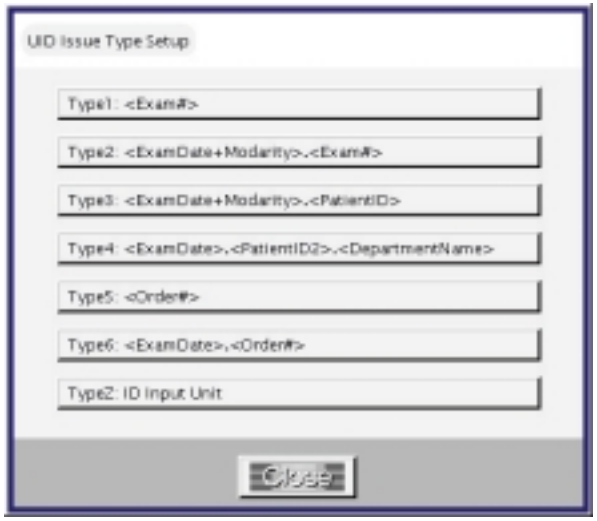


FT100750.EPS

I. UID setup

- RIS UID Used
  When connected to the RIS, sets whether or not to use the study information issued by the RIS.
- USD Issue
  Sets whether or not the IDT-IV issue the study information or series information.
  After setting the UID Issue to ON, set the UID issue system.
- UID Issue Type
  Touch the UID Issue Type button.
  ➔ The “UID Issue Type Setup” screen opens.

Select the Study Instance UID issue type.



FT100751.EPS

● UID issue type

Type 1 to 4 : Data used for issuing the UID can be transmitted basically to the IDT-IV, FCR5000 series and HI-C655, etc. that are available for such purposes, even in the environment where previous-generation devices are used mixed with new-type devices.

Because the same UID will be issued even when the Study Instance UID is issued by any of those devices, this UID issue type can be used independent of the system configuration.

Selection of Type 1 to 4 should be decided based on the data that is input at the user site securely. Be sure to use the same UID issue type for the entire system.

Type 5 & 6 : This UID issue type can be used in institutions where the ordering system has been adopted, when Study information issued by the IDT-IV is transmitted to the DICOM image generator securely.

This type cannot be used when previous-generation type devices (IDT-IV series, serially connected FCR5000, E-i/f-connected HIC, etc.) are used mixed with new-type devices because this type can be specified only in the IDT-IV.

Type Z : This type issues a unique Study Instance UID each time one patient is input using one unit of IDT-IV.

This issue type cannot be used when previous-generation type devices (IDT-III series, serially connected FCR5000, E-i/f-connected HIC, etc.) are used mixed with new-type devices because this type can be specified only in the ID-T741.

● Preference of UID issues

The UID issue type will be changed when falling in any of the following.

- When any of data used for UID issue includes an invalid value or
- When it exceeds the maximum length stipulated of the UID.

When it has been set so that the Study information issued by the RIS (F-RIS, etc.) can be used, such information will be used preferentially, irrespective of UID issue type specified.

Order of preference of UID issue types is as follows.

1. Using the Study information issued by the RIS (RIS-issued UID is used).
2. Issuing UIDs using the UID issue type (any of Type 1 to 6 and Type Z) selected on the “Interface Data Setup” screen.
3. Issuing UIDs using Type 3.
4. Issuing UIDs using Type Z.

● Definition of Study

Basically, a series of exposure made on one patient will be considered one Study.

For F-RIS ordering, Study information is included in the patient exposure ordering information.

When “RIS UID Used” has been set to ON, this Study information will be used.

When “RIS UID Used” has been set to OFF for F-RIS ordering or for serial-connection ordering, a series of exposure grouped according to an Accession Number will be handled as one Study.

● Definition of Series

Images generated from exposure (interval exposure) made with PS specified for the function will be handled as one series.

A series of exposure grouped into examination menu can also be handled as one series, and it is possible to specify whether to handle or not such exposure as a Study for each examination menu.

Selecting a Study Instance UID issue type on the “UID Issue Type Setup” screen will return the display to the “Interface Data Setup” screen.

II. Data type setup

- Network IR I/F

  Defines interface between the IDT-IV and 5000/R or 5501/2.

  "FINP110" is available from software version A07. For this interface, the restriction fixing the patient ID numbers and study numbers at 10 figures has been released and the data length extended.

- Serial ID online

  Sets whether to use previous interface or extended interfaces for each patient information online interface.

  Extended interface is available from software version A07. When using extended interface, select "LONG" because the data field length for the patient ID numbers or study numbers has been extended.

III. Examination number field setup

Sets which of the examination number, reception number or order number that was input in the IDT-IV is to be handled as the study number.

The number specified as the study number will be handled as the "Accession Number" when an image is output via DICOM from the Image Reader or QA-WS.

(2) Touch [OK].

➔ You are returned to the "Maintenance process" menu screen.

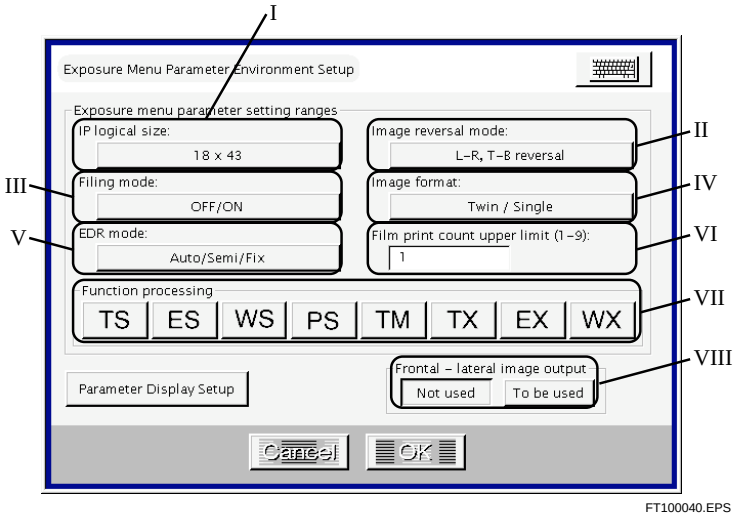
3.7.8 Setting the exposure menu parameters

Use the following procedures to define the setting ranges of exposure menu parameters and how the parameters are to be displayed.

■ Defining the exposure menu parameter setting ranges

From the "Maintenance process" menu screen, select [Exposure menu parameter environment setup].

➔ The "Exposure menu parameter environment setup" screen opens.



FT100040.EPS

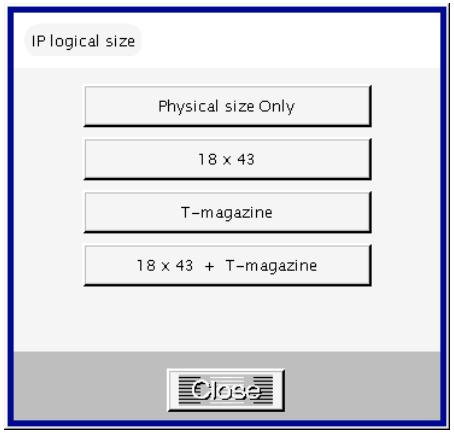
I. Touch the button in the "IP logical size" column.

➔ The "IP logical size" screen opens.

Select the size to be used.

◆ *NOTE* ◆

The logical size is "18 x 43" for the FCR5000 and "T Magazine" for Toshiba cassetteless units.



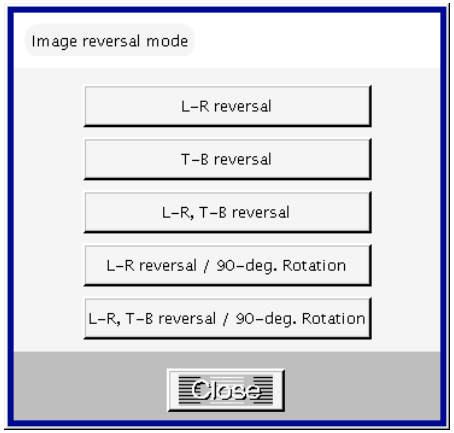
FT100229.EPS

➔ You are returned to the "Exposure menu parameter environment setup" screen.

II. Touch the button in the image reversal mode column.

➔ The "Image reversal mode" screen opens.

Select a mode.



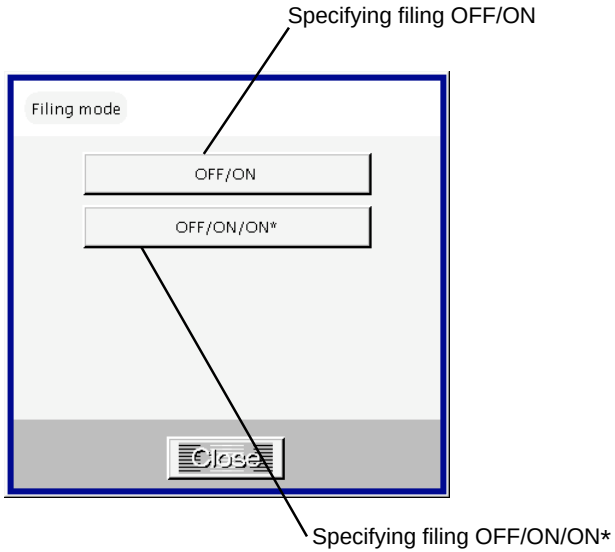
FT100230.EPS

➔ You are returned to the "Exposure menu parameter environment setup" screen.

III. Click the button in the filing mode column.

➔ The "Filing mode" screen opens.

Select a mode.



OFF: Not transmitting images to the ODF.
ON: Filing to the ODF HQ images as they are in high density and standard images as they are with no particular processing done.
ON*: Filing to the ODF HQ images after they have been converted to standard density images and standard images as they are with no particular processing done.

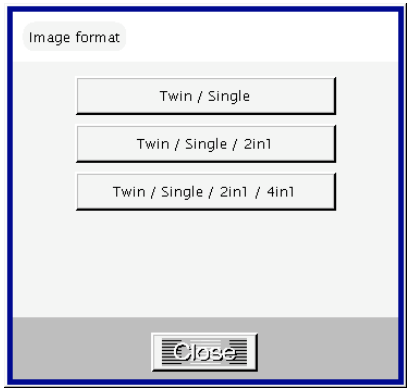
FT100231.EPS

➔ You are returned to the "Exposure menu parameter environment setup" screen.

IV. Touch the button in the “Image format” column.

➔ The “Image format” screen opens.

Select a format.



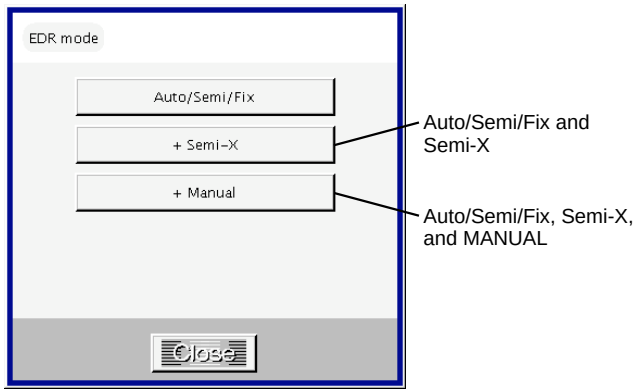
FT100232.EPS

➔ You are returned to the “Exposure menu parameter environment setup” screen.

V. Touch the button in the “EDR mode” column.

➔ The “EDR mode” screen opens.

Select a mode.



FT100233.EPS

➔ You are returned to the “Exposure menu parameter environment setup” screen.

VI. Enter a setting between 1 and 9 to specify the film output count upper limit.

VII. Specify which of eight function codes other than RT is to be displayed.

RT is always displayed.

RT : Routine processing (routine exposure)
TS : Temporal subtraction processing
ES : Energy subtraction processing
WS : Whole-spine processing
PS : IVP processing
TM : Tomographic processing
TX : Collective temporal subtraction processing
EX : Collective energy subtraction processing
WX : Collective whole-spine processing

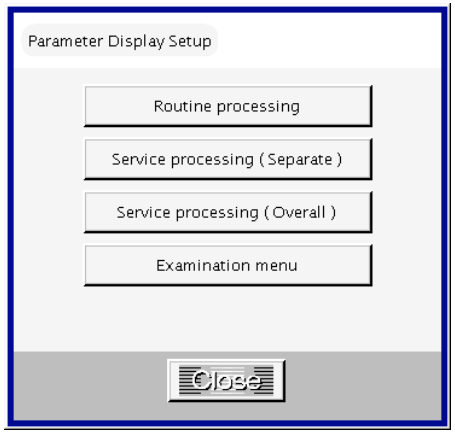
VIII. Specify “Frontal-lateral image output”.
This setting is valid only when9501 or 9502 is connected.

■ Defining the display of parameter buttons

Use the following procedures to define how the parameter buttons are to be displayed in the routine mode and service mode.

From the “Exposure menu parameter environment setup” screen, select [Parameter display setup].

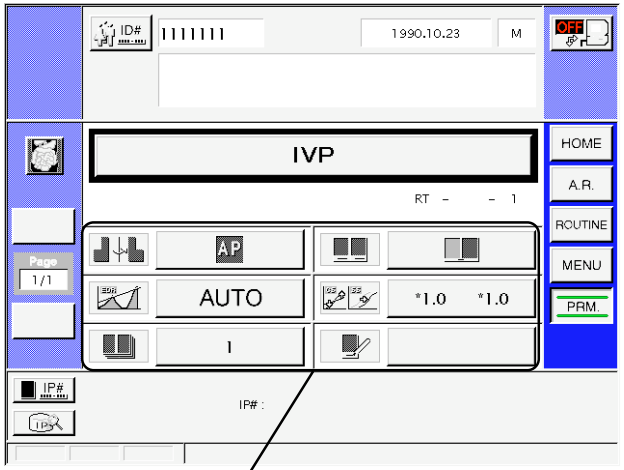
➔ The “Parameter display setup” screen opens.



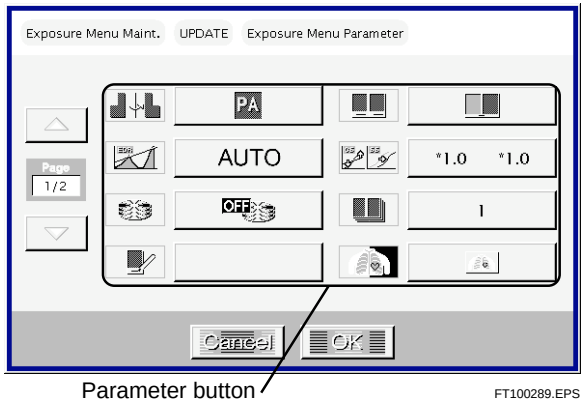
FT100240.EPS

The buttons in the “Parameter display setup” screen are described below.

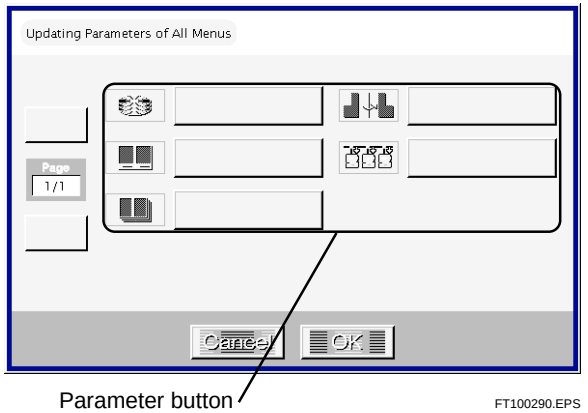
[Routine processing]: Used to register, reposition and delete the parameter buttons displayed in routine mode (the normal operation mode).



[Service processing (Separate)]: Used to register, reposition and delete the parameter buttons displayed when conducting exposure menu maintenance in service mode.



[Service processing (Overall)]: Used to register, reposition and delete the parameter buttons displayed when collectively overwriting exposure menu parameters in service mode with the service engineer password (111111).



[Examination menu]: Used to register, reposition and delete the parameter buttons displayed when conducting examination menu maintenance in service mode.

To change the default setup, register, reposition, and/or delete parameter buttons as needed.

The same parameter button operating procedures apply to the routine mode and service mode.

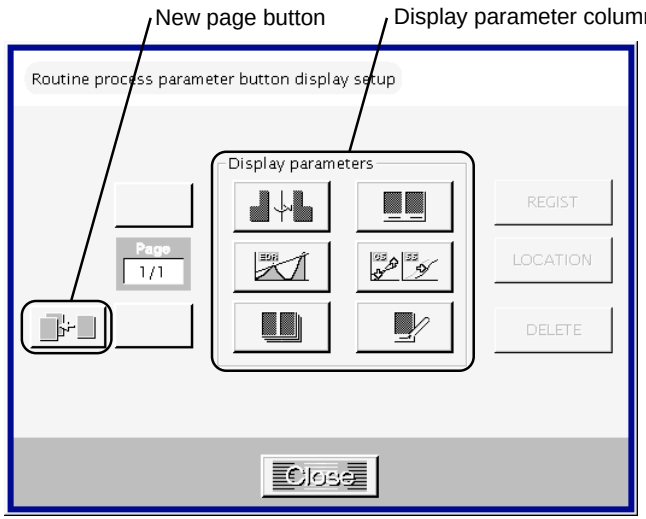
Explanations are given below using the routine mode as an example

(1) From the “Exposure menu parameter environment setup” screen, touch [Parameter display setup].

→ The “Parameter display setup” screen opens.

(2) From the “Parameter display setup” screen, touch [Routine processing].

→ The “Routine process parameter button display setup” screen opens.



FT100042.EPS

● Display settings for routine processing

: Image style (90° upward/downward/clockwise/counterclockwise image rotation)

: EDR mode (image reading sensitivity setup method)

: Film output count

: Image format (film output format for images)

: CS SS (image contrast and density)

: Film mark (on-film exposure-direction marking characters such as AP and PA)

: IP logical size (size selection for logical reading)

: Filing mode (image recording on the ODF)

: Function (special processing performed depending on the image exposure state)

: Film edge (image background color on film)

: Read sensitivity center shift (shifting image reading sensitivity by 0.5/1 digit)

: Distribution code (8-digit code for specifying the image transfer destination)

: Film reference direction (specifying 14”x14” [35x35cm] image orientation on film)

: Pixel sensitivity (selection of standard or high-quality image)

● Display settings for special options

: Auto-repeat

: Film size (statistical data on used film)

: Division count

: IP logical reading size for 5501

: IP logical reading size for 9501

: IP logical reading size for 9502

● **Registering a parameter button**

(1) Note the “Display parameter” column and select a box for which parameter setup has not been completed.

If parameter setup has already completed for all the boxes, touch the New Page button to add a page, and when the next page appears to display the “Display parameter” column, select a box for which parameter setup has not been completed.

(2) Touch [REGIST].

→ The “Display parameter” screen opens.

(3) Select the parameter button to be registered.

→ You are returned to the “Routine process parameter button display setup” screen.

(4) Touch [Close].

→ You are returned to the “Exposure menu parameter environment setup” screen.

(5) Touch [OK].

→ You are returned to the “Maintenance process” menu screen.

● **Changing the parameter button display position**

(1) Select one parameter button.

(2) Touch [LOCATION].

(3) Touch another parameter button that is to exchange positions with the first selected one.

→ The two designated parameter buttons switch their display positions.

(4) Touch [Close].

→ You are returned to the “Exposure menu parameter environment setup” screen.

(5) Touch [OK].

→ You are returned to the “Maintenance process” menu screen.

● **Deleting a parameter button**

(1) Select the parameter button to be deleted.

(2) Touch [DELETE].

→ The confirmation message box opens.

(3) Touch [Yes].

→ The selected parameter button is then deleted.

(4) Touch [Close].

→ You are returned to the “Exposure menu parameter environment setup” screen.

(5) Touch [OK].

→ You are returned to the “Maintenance process” menu screen.

3.7.9 Setting the optional functions

When using the optional functions, it is necessary to set them up. If no optional functions are to be used, skip this section.

☞ Installation, “4. Option Setup”

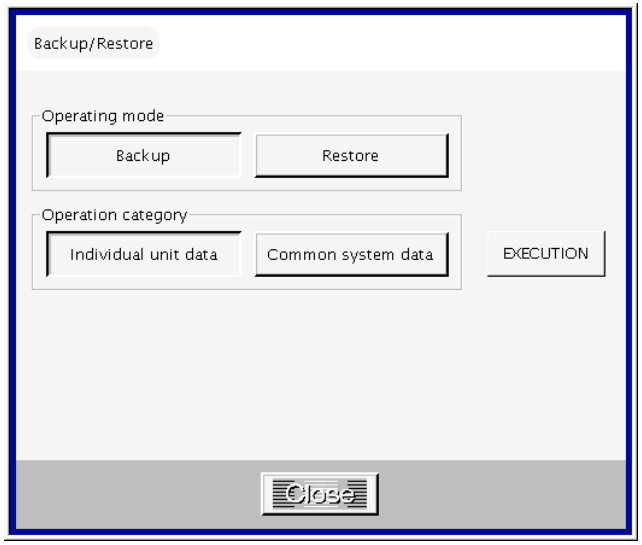
3.7.10 Backing up the setup data

Store data items set in the maintenance mode on the floppy disk.

(1) From the "Maintenance process" menu screen, select [Backup/Restore].

➔ The "Backup/Restore" screen opens.

(2) Touch [Backup] in the operating mode area.



FT100043.EPS

(3) Touch [Individual unit data] in the operation category area.

(4) Prepare the floppy disk on which the data was saved as directed in section "3.7.9 Backing up the setup data." Insert the disk into the floppy disk drive.

(5) Touch [EXECUTION].

➔ The backup process starts.

The "Process Completed" screen opens.

(6) Touch [OK].

➔ You are returned to the "Maintenance process" menu screen.

3.8 Setting the Slave IDT

Perform the optional software installation and maintenance mode setup procedures at all IDT-IV units other than the master IDT.

3.8.1 Installing the optional software

Prior to maintenance mode setup, install the optional software.

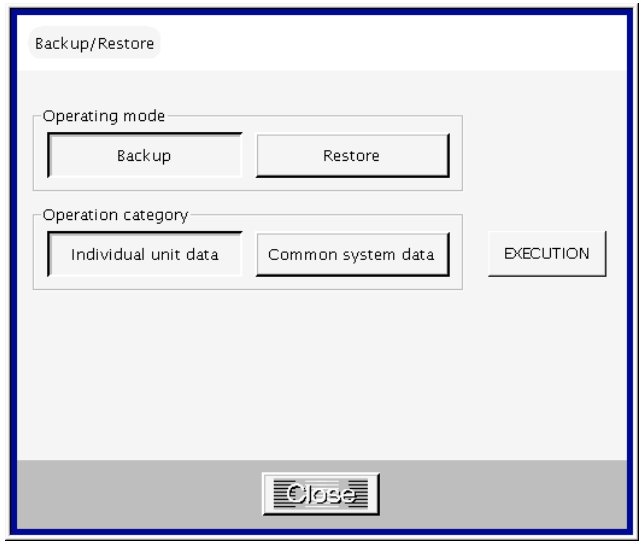
☞ "3.3.3 Installing the optional software; 3.3.4 Installing the SIF04A board driver"

3.8.2 Restoring the setup data

Perform the following procedure to restore the data saved as directed in section "3.7.9 Backing up the setup data," for the purpose of setting the master IDT setup data for the slave IDT units.

(1) From the "Maintenance process" menu screen, select [Backup/Restore].

➔ The "Backup/Restore" screen opens.



FT100043.EPS

(2) Touch [Restore] in the operating mode area.

(3) Touch [Individual unit data] in the operation category area.

(4) Prepare the floppy disk on which the data was saved as directed in section “3.7.9 Backing up the setup data.” Insert the disk into the floppy disk drive.

(5) Touch [EXECUTION].

➔ The restore process starts.

The “Process Completed” screen opens.

(6) Touch [OK].

➔ You are returned to the “Maintenance process” menu screen.

3.8.3 Adjusting the setup data as needed for individual devices

If any of the following setup data needs to be different from the master IDT setup data, adjust the setup on an individual device basis.

- System setup

☞ “3.7.1 Setting the hookup devices”

- Selector setup

☞ “3.7.4 Setting the selector”

- Operating environment setup

☞ “3.7.5 Setting the operating environment”

- Data format setup

☞ “3.7.6 Setting the data formats”

- Exposure menu parameter setup

☞ “3.7.8 Setting the exposure menu parameters”

- Option setup

☞ “3.7.9 Setting the optional functions”

4. Option Setup

This section explains about the optional function setup procedures to be performed in the installation process.

4.1 Setting the Patient Information On-line Function

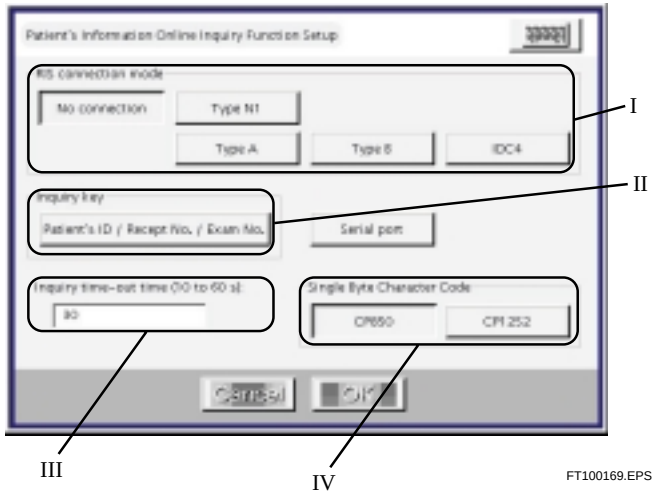
Perform patient information management setup and serial hookup device setup as indicated below.

■ Defining the patient information management setup

- RIS connection mode setup
- Inquiry key setup
- Inquiry time-out setting (valid when the RIS connection mode is [Type B] connection or [IDC4])

From the "Maintenance process" menu screen, select [Patient's information online inquiry function setup].

➔ The "Patient's information online inquiry function setup" screen opens.



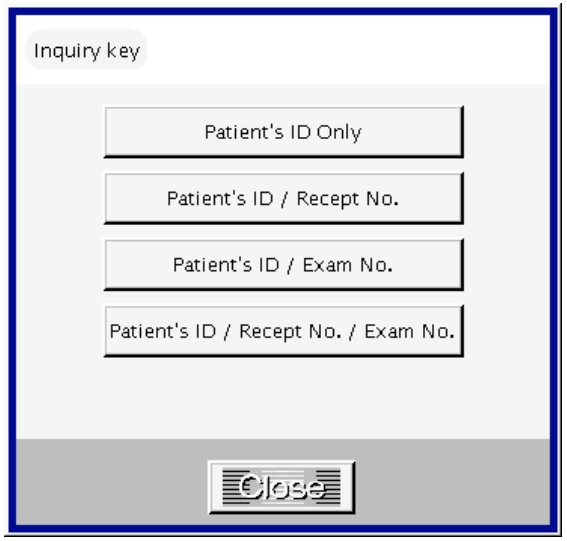
FT100169.EPS

I. Select a connection mode for the RIS.

II. Touch the [Inquiry key] button.

➔ The "Inquiry key" screen opens.

Select a key for patient information inquiry.



FT100291.EPS

➔ You are returned to the "Patient's information online inquiry function setup" screen.

III. Set the length of the inquiry time-out.
This is valid when the RIS connection mode is [Type B] connection or [IDC4]. Default (30 sec.) should be left as it is.

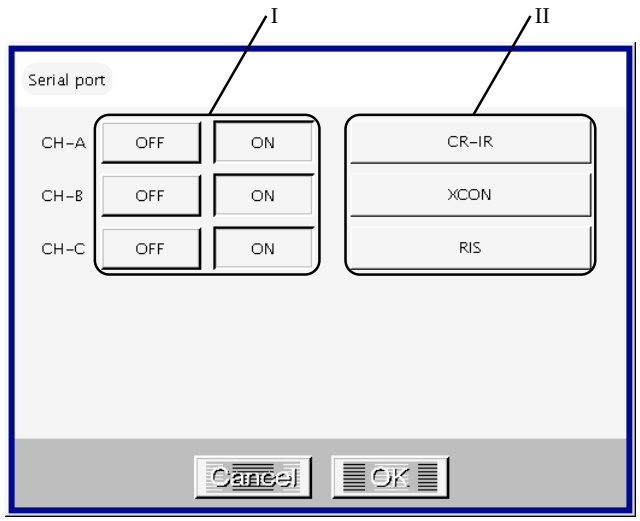
IV. Select the appropriate "Single Byte Character Code" system.

■ Defining the serial connection devices

Perform the following procedure to define the channels and devices to be connected.

(1) From the “Patient’s information online inquiry function setup” screen, touch [Serial port].

➔ The “Serial port” screen opens.



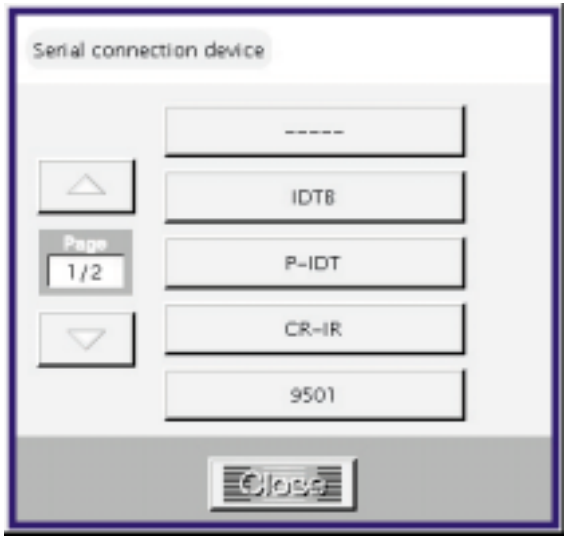
FT100028.EPS

I. Specify the channel to be connected, and then select [ON].

II. Touch a button for hookup device selection.

➔ A list of connectable devices appears.

Select the device to be connected.



FT100292.EPS

* P-IDT is not available and is available only in Japan.

➔ You are returned to the “Serial port” screen.

(2) Touch [OK].

➔ You are returned to the “Patient information on-line function setup” screen.

(3) Touch [OK].

➔ You are returned to the “Maintenance process” menu screen.

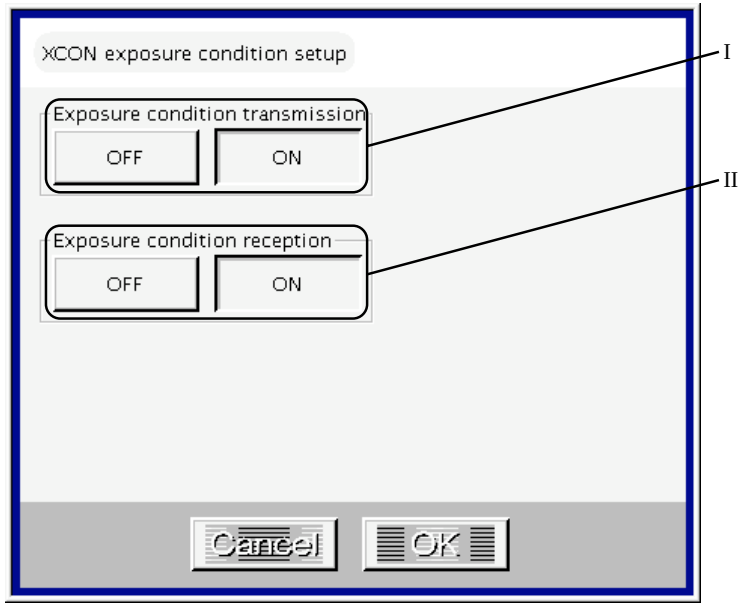
4.2 Setting the XCON Exposure/Implementation Conditions

Complete the following setup procedures. You may perform the procedures in any order.

- Exposure condition transmission setup
- Implementation condition reception setup

(1) From the “Maintenance process” menu screen, select [XCON exposure condition setup].

➔ The “XCON exposure condition” setup screen opens.



FT100170.EPS

I. Specify whether or not to transmit the exposure condition data.

II. Specify whether or not to receive the implementation condition data.

(2) Touch [OK].

➔ You are returned to the “Maintenance process” menu screen.

APPENDIX 1 ID CARD DATA FORMAT

Two types of data formats are available for the ID card: JIS-II type and JIS-I type (ISO). The system codes are defined as follows depending on how the area of Extended Specification is used.

- JIS-II type: FUJI, FJ01, FJ02, FJ03, FJ04
- JIS-I type (ISO): FUJI, FJ51

1. JIS-II Type

1.1 Fuji Standard Format (FUJI)

It is Fuji Photo Film's standard format, whose system code is FUJI. Since undefined regions cannot be used, they must be filled with space (20H).

Note that kanji characters cannot be used for patient names.

Digit	1	2	3	4	5	6	7	8	9	—	24	25	26	27
Content	STX	System code (FUJI)				SO/SI	Patient name (20 digits)							SO/SI

Digit	28	29	—	36	37	38	39	40	41	42	43	44	45	46	47	48
Content	Number (10 digits)					Birth date										Sex
						Year				•	Month		•	Day		Male/Female

("•" denotes a period.)

Digit	49	50	51	52	53	54	55	56	57	58	—	69	70	71	72
Content	Undefined (22 digits) (space: 20H)													ETX	LRC

1.2 Extended Format (FJ01)

To use Kanji characters for the patient name, use the Extended Format. Its system code is FJ01.

Digit	1	2	3	4	5	6	7	8	9	—	24	25	26	27
Content	STX	System code (FJ01)				SO/SI	Patient name (20 digits)							SO/SI

Digit	28	29	—	36	37	38	39	40	41	42	43	44	45	46	47	48
Content	Number (10 digits)					Birth date										Sex
						Year				•	Month		•	Day		Male/Female

("•" denotes a period.)

Digit	49	50	51	52	53	54	55	56	57	58	—	69	70	71	72
Content	Distribution code (4 lower digits)				ESC	$	B	SI	Name in Kanji (14 digits)					ETX	LRC

1.3 Extended Format (FJ02)

To use the department name in alphanumeric characters and distribution code, use the Extended Format. Its system code is FJ02.

Digit	1	2	3	4	5	6	7	8	9	—	24	25	26	27
Content	STX	System code (FJ02)				SO/SI	Patient name (20 digits)							SO/SI

Digit	28	29	—	36	37	38	39	40	41	42	43	44	45	46	47	48
Content	Number (10 digits)					Birth date										Sex
						Year				•	Month		•	Day		Male/Female

("•" denotes a period.)

Digit	49	50	—	55	56	57	58	—	63	64	65	—	69	70	71	72
Content	Alphanumeric department name (8 digits)					Distribution code (8 digits)					Undefined (6 digits)				ETX	LRC

1.4 Extended Format (FJ03)

To use the test number and alphanumeric department name, use the Extended Format. Its system code is FJ03.

Digit	1	2	3	4	5	6	7	8	9	—	24	25	26	27
Content	STX	System code (FJ03)				SO/SI	Patient name (20 digits)							SO/SI

Digit	28	29	—	36	37	38	39	40	41	42	43	44	45	46	47	48
Content	Number (10 digits)					Birth date										Sex
						Year				•	Month		•	Day		Male/Female

("•" denotes a period.)

Digit	49	50	—	55	56	57	58	—	65	66	67	68	69	70	71	72
Content	Alphanumeric department name (8 digits)					Test number (10 digits)					Undefined (4 digits)				ETX	LRC

1.5 Extended Format (FJ04)

To use the distribution code and test number, use the Extended Format. Its system code is FJ04.

Digit	1	2	3	4	5	6	7	8	9	–	24	25	26	27
Content	STX	System code (FJ04)				SO/SI	Patient name (20 digits)							SO/SI

Digit	28	29	–	36	37	38	39	40	41	42	43	44	45	46	47	48
Content	Number (10 digits)					Birth date										Sex
						Year			•	Month		•	Day			Male/Female

("•" denotes a period.)

Digit	49	50	–	55	56	57	58	–	65	66	67	68	69	70	71	72
Content	Distribution code (8 digits)					Test number (10 digits)					Undefined (4 digits)				ETX	LRC

1.6 Extended format (FJ05)

Use this extended format when using English or kanji department names. The system code is FJ05.

Digit	1	2	3	4	5	6	7	8	9	–	24	25	26	27
Content	STX	System code (FJ05)				SO/SI	Patient name (20 digits)							SO/SI

Digit	28	29	–	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Content	Number (10 digits)					Birth date										Sex	SO/SI
						Year			•	Month		•	Day			Male/ Female	

("•" denotes a period.)

Digit	49	50	–	56	57	58	59	60	61	62	63	64	–	69	70	71	72
Content	Department name in English (8 digits)					SO/SI	ESC	$	B	B	Department name in Kanji (8 digits)					ETX	LRC

2. JIS-I Type (ISO)

2.1 Fuji Standard (ISO) Format

A standard-specification card that is not particularly specified should comply with this format. This format is supported by all FCR systems.

Digit	1	2	3	4	5	6	7	8	9	—	25	26	27	28
Content	STX	F	System code (FUJI)				Space	Patient name (20 digits)						Space

Digit	29	30	—	37	38	39	40	41	42	43	44	45	46	47	48	49
Content	Number (10 digits)					Birth date										Sex
						Year				•	Month		•	Day		Male/Female

Digit	50	51	52	—	76	77	78	79
Content	Undefined (28 digits)						ETX	LRC

2.2 Extended Format (FJ51)

In the ISO specification format, to use the alphanumeric department name, distribution code, test number, use the Extended Format. Its system code is FJ51.

Digit	1	2	3	4	5	6	7	8	9	—	25	26	27	28
Content	STX	System code (FJ51)					Space	Patient name (20 digits)						Space

Digit	29	30	—	37	38	39	40	41	42	43	44	45	46	47	48	49
Content	Number (10 digits)					Birth date										Sex
						Year				•	Month		•	Day		Male/Female

Digit	50	51	—	56	57	58	59	—	64	65	66	67	—	74	75	76	77	78	79
Content	Alphanumeric department name (8 digits)					Distribution code (8 digits)					Test number (10 digits)					Space (2 digits)		ETX	LRC

3. Data Definition

◆ ***NOTES*** ◆

- *Exercise care not to confuse the JIS and ISO cards, since they contain different character codes.*
- *Undefined regions in the recorded information must be filled with space code (JIS: 20H/ISO: 00H) if:*
  - *Some of the information to be recorded into the ID card cannot be entered; and*
  - *The number of characters actually entered is smaller than the number of characters specified in this specification.*

■ STX: Start Code

This code indicates the start of text that has been written.

■ System Code: Identification Code

Four-character code that identifies whether the ID card is for FCR use or not.

Identification code	Format type
FUJI	Standard format
FU** (*: numeral)	Extension format
Others	Hospital individual format

■ SI/SO: Extended Code

◆ ***NOTE*** ◆

This code exists only in JIS.

SI and SO are used in pair as a special character to extend graphic characters.

- From SI to next SO: Graphic characters for alphabets
- From SO to next SI: Graphic characters for Katakana

■ Patient Name

● For JIS

This indicates a patient name by not greater than 20 Roman characters or Katakana graphic characters, excluding @ and *. To switch between alphabet and Katakana modes, use SI/SO code.

Any SI/SO code of not greater than 20 characters of the patient name is substituted by space code (20H) and handled as part of the 20-character patient name.

● For ISO

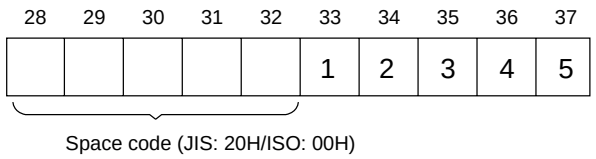
This indicates a patient name by not greater than 20 Roman characters or Roman special characters, excluding @ and *.

For Roman special characters, set MAG CARD of the IDT management information to 1, and set Roman special character codes and characters used in "Setting Character Code for Reading ISO Card."

■ Number: Patient Number

This indicates a patient number for identifying the patient by graphic characters in alphabetic mode, excluding @ and *.

If the patient number falls short of ten digits, enter characters from the right-most location, and fill the rest with space code (JIS: 20H/ISO: 00H).

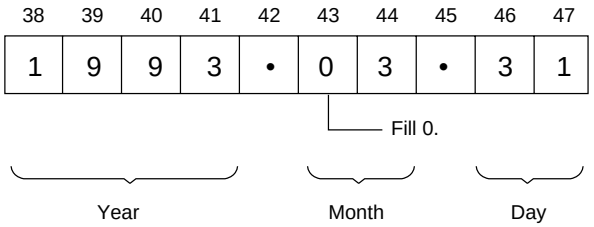


■ Birth Date: Patient Birth Date

This indicates the patient's birth date in the dominical year.

- Year: Four digits from 0 to 9.
- Month: Two digits from 0 to 9.
- Day: Two digits from 0 to 9.

If the number of digits for the birth date falls short of its effective number of digits, enter numbers from the right-most location, and fill the rest with zero (JIS: 30H/ISO: 10H).



◆ ***NOTE*** ◆

"•" in the 42th and 45th digits denotes a period (JIS:2EH/ISO:0EH).

■ Sex: Patient Sex

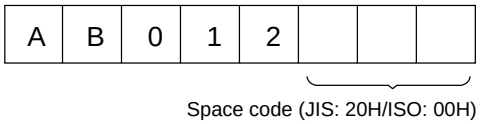
The sex of a patient is denoted by one alphabetic character.

- Male: M
- Female: F

■ Alphanumeric Department Name: Name of Requesting Department

This indicates the requesting department in not greater than eight alphabetic graphic characters, excluding @ and *. This data is recorded on film and used for classification of requesting departments, but not used for system control.

If the name of the requesting department falls short of eight digits, enter characters from the left-most digit, and fill the rest with space code (JIS: 20H/ISO: 00H).



■ Undefined: Undefined Area

For a card with the Standard Format, the undefined area cannot be used. Use space code (JIS: 20H/ISO: 00H) for the undefined area.

To use this area for a special purpose, change the system code from the Standard format to another.

■ ESC.$.B.SI: Double-Byte Code Indicator/Call

◆ ***NOTE*** ◆

This code exists only in JIS.

It indicates that there is some double-byte Kanji code specified in JIS-X-0208. If Kanji is not used, fill it with space code (20H).

■ Patient Name in Kanji

◆ ***NOTE*** ◆

This code exists only in JIS.

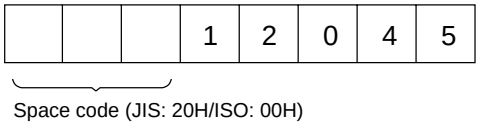
It indicates the name of a patient in seven characters of double-bye Kanji code specified in JIS-X-0208. When Kanji is not used, fill it with space code (20H) as in the case of ESC.$.B.SI.

■ Distribution Code (8 digits)

The distribution code is used to set a destination of image data transfer. If the distribution code falls short of eight digits, enter characters from the right-most location, and fill the rest with space code (JIS: 20H/ISO: 00H).

Correspondence between the transfer destination and distribution code value may be set arbitrarily by the user.

When this code is not used, fill it with space code (JIS: 20H/ISO: 00H).

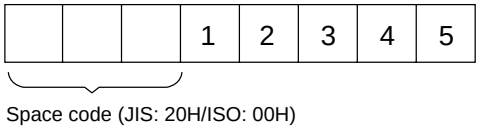


■ Test Number (10 digits)

The test number represents the data transferred mainly from the hospital information system to identify the distinction between tests conducted. If the test number falls short of ten digits, enter characters from the right-most location, and fill the rest with space code (JIS: 20H/ISO: 00H).

This code is not used for control purposes.

When this code is not used, fill it with space code (JIS: 20H/ISO: 00H).



■ ETX: End Code

This code indicates the end of text.

■ LRC: LRC Code

LRC denotes a horizontal redundancy code for a horizontal parity check bit of information characters recorded.

Horizontal parity check is performed from the start code to the end code.

APPENDIX 2 HARDWARE MAINTENANCE UTILITY

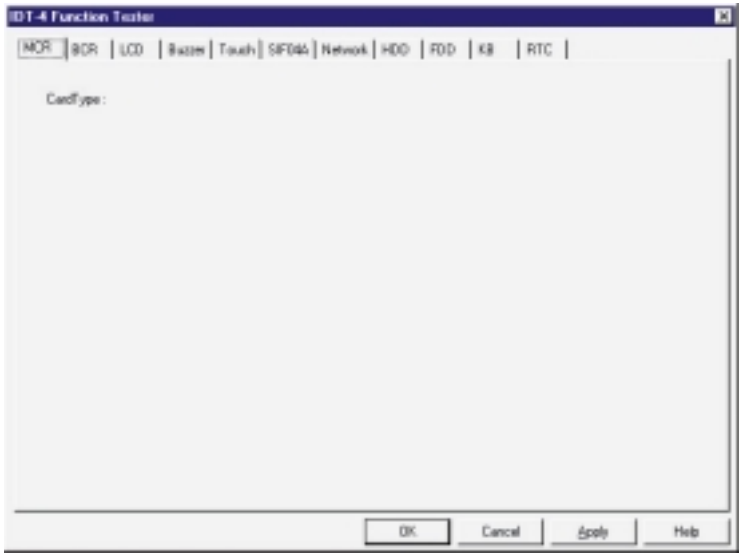
This utility checks the following for precision or whether normal or not.

- MCR (magnetic card reader)
- BCR (barcode reader)
- LCD
- Buzzer
- Touch (touch panel)
- SIF04A
- Network
- HDD
- FDD
- KB (keyboard)
- RTC (date and time)

Among items listed above, “MCR”, “BCR” and “Touch” are used frequently by service engineers.

Touch “Hardware maintenance utility” on the “Maintenance process” menu screen.

➔ The “IDT-4 Function Tester” screen appears.

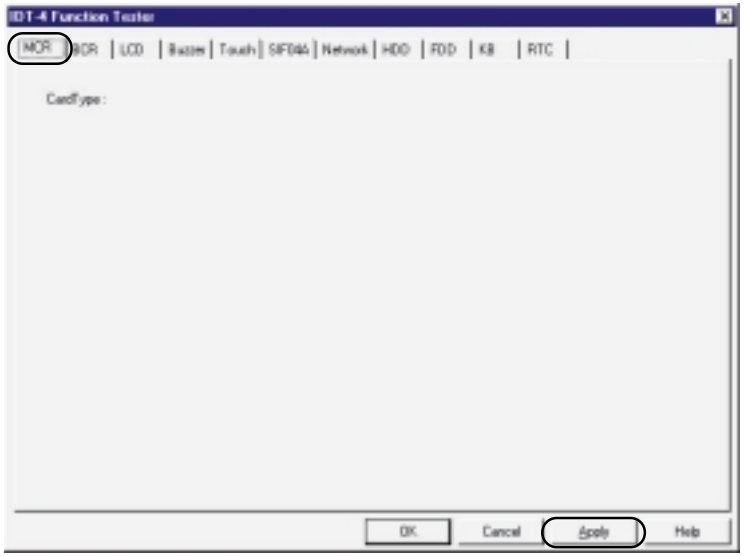


FT100350.EPS

1. MCR (magnetic card reader)

Described below is how to check the magnetic card reader.

(1) Touch the “MCR” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].

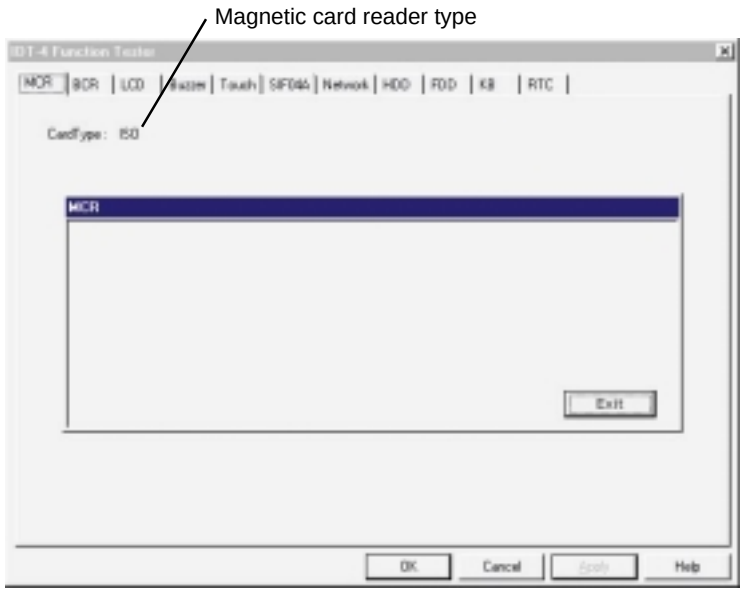


FT100363.EPS

➔ The type of the magnetic card reader installed and the “MCR” dialog appear.

◆ NOTE ◆

In the following cases, the magnetic card reader type will not appear.
- *When no magnetic card reader has been installed.*
- *Magnetic card reader has been installed, but the equipment does not recognize it.*



FT100351.EPS

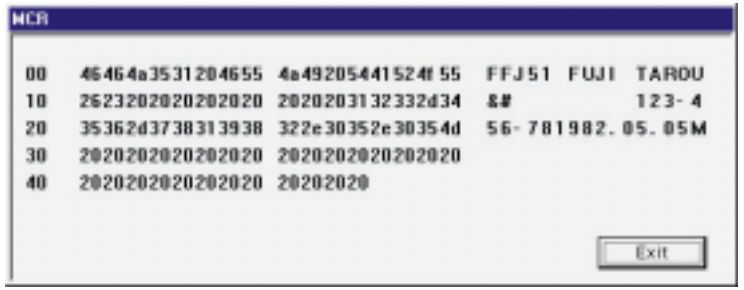
(2) Pass the magnetic card through the magnetic card reader.

→ Data recorded on the magnetic card appears on the "MCR" dialog as the dump list.

◆ NOTE ◆

- *If a magnetic card used for shipment inspection from factory was used in step (2) above, "OK" will appear in the "MCR" dialog and not the dump list.*
- *If a magnetic card used in step (2) above cannot be read, nothing will appear in the "MCR" dialog.*

(3) Touch [Exit].



FT100352.EPS

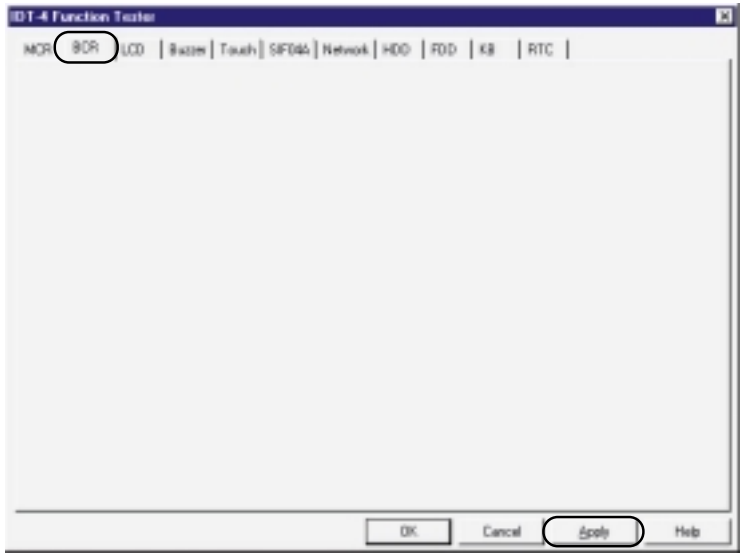
→ You are returned to the "IDT-4 Function Tester" screen.

When re-checking the magnetic card reader, touch another menu tab and then touch the "MCR" tab.

2. BCR (barcode reader)

Described below is how to check the barcode reader.

(1) Touch the "BCR" tab on the "IDT-4 Function Tester" screen, and then touch [Apply].



FT100353.EPS

→ The "BCR" dialog will appear.

(2) Read the barcode with the barcode reader.

→ The read result will appear.

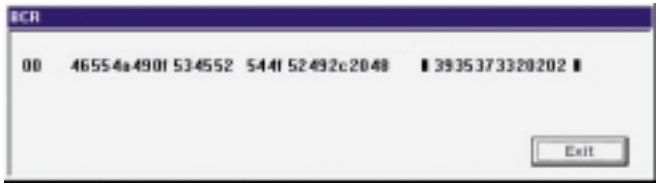
- When the IP barcode has been read

  "OK" appears in the "BCR" dialog.

FT100354.EPS

- When a barcode that is not the IP barcode has been read

  The dump list appears in the "BCR" dialog.



FT100355.EPS

(3) Touch [Exit].

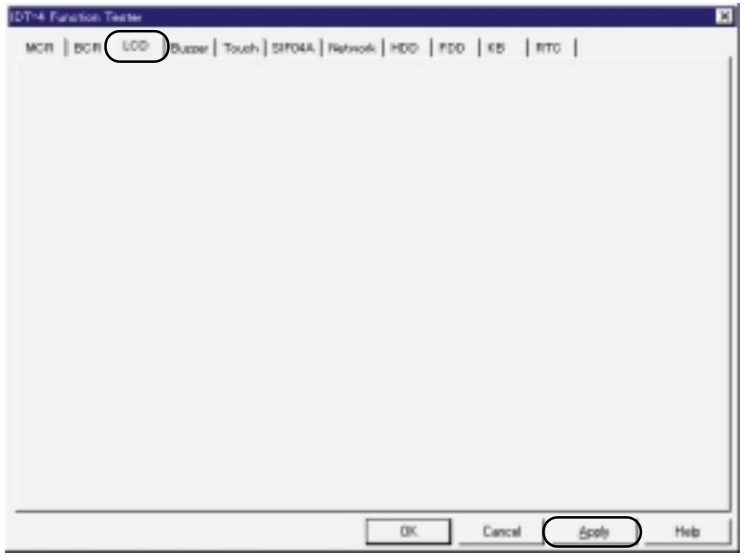
→ You are returned to the "IDT-4 Function Tester" screen.

When re-checking the barcode reader, touch another menu tab and then touch the "BCR" tab.

3. LCD

Described below is how to check the LCD.

(1) Touch the “LCD” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].



FT100356.EPS

➔ The following screens appear sequentially in this order.

FT100357.EPS

FT100358.EPS

FT100359.EPS

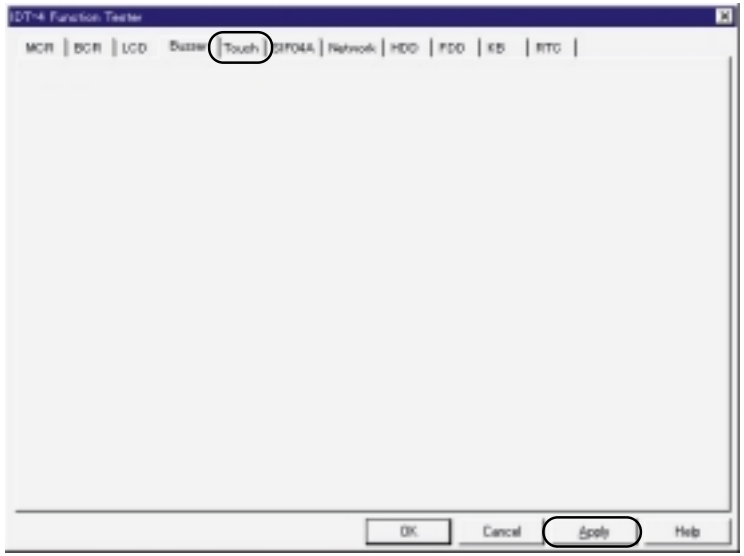
➔ After a while, you are returned to the “IDT-4 Function Tester” screen.

When re-checking the LCD, touch another menu tab and then touch the “LCD” tab.

4. Buzzer

Described below is how to check the Buzzer.

(1) Touch the “Buzzer” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].



FT100376.EPS

➔ The buzzer will sound for a few seconds.

When re-checking the Buzzer, touch another menu tab and then touch the “Buzzer” tab.

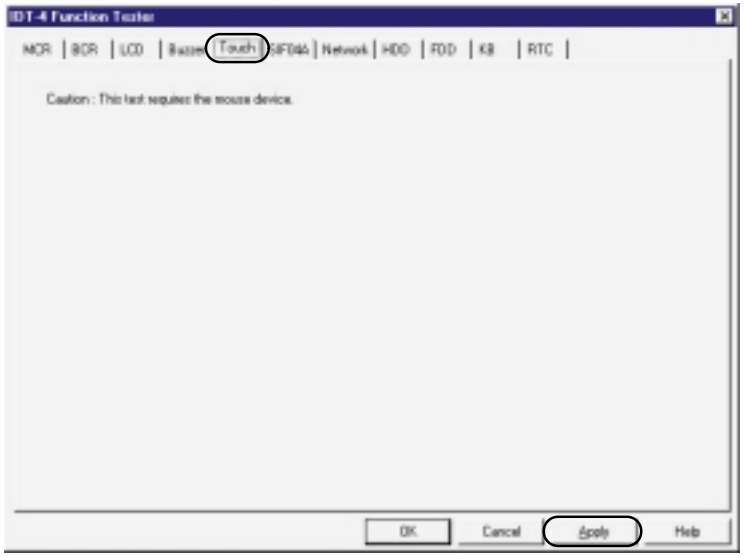
5. Touch (touch panel)

Described below is how to check the touch panel.

◆ ***NOTE*** ◆

Make sure to connect the full keyboard.

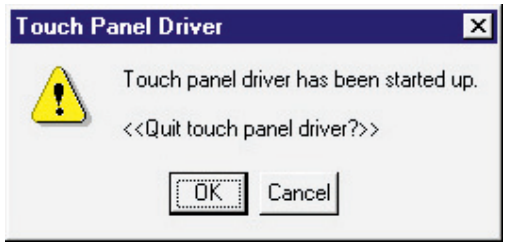
(1) Touch the “Touch” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].



FT100360.EPS

➔ The “Touch Panel Driver” dialog appears.

(2) Touch [OK].



FT100364.EPS

➔ The "Touch Panel Driver Settings (with LCD)" dialog appears.

(3) Touch the <Tab> key some times, select [OK] and then touch <Enter>.

◆ NOTE ◆

• Do not change these settings. Do not perform [Calibration].

• Do not place anything on the LCD panel.

FT100361.EPS

➔ The "TestResult" dialog appears.

(4) Touch [OK].

Following are the items displayed in the "TestResult" dialog.
Precisions (precision of the sensor that has been set)
Fourfold: Quadruple precision (default setting)
Twofold: Double precision
Single: Single precision

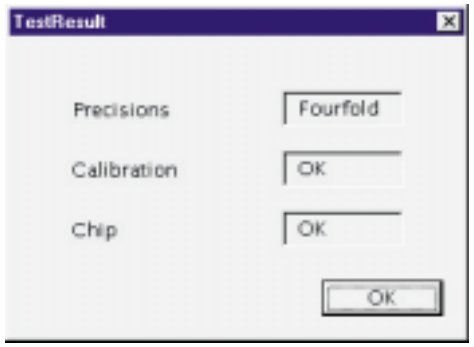
Calibration (calibration result of the sensor)
OK: Normal
NG: Abnormal

Chip (checking of defective elements)
OK: No defective elements

NG: Defective elements

◆ NOTE ◆

Checking can result in "NG" in cases described below.
• When there is something on the LCD panel.
• When the touch panel sensor (edge of the LCD panel) is contaminated.



FT100362.EPS

➔ You are returned to the "IDT-4 Function Tester" screen.

When re-checking the touch panel, touch another menu tab and then touch the "Touch" tab.

6. SIF04A

Described below is how to check the SIF04A board.

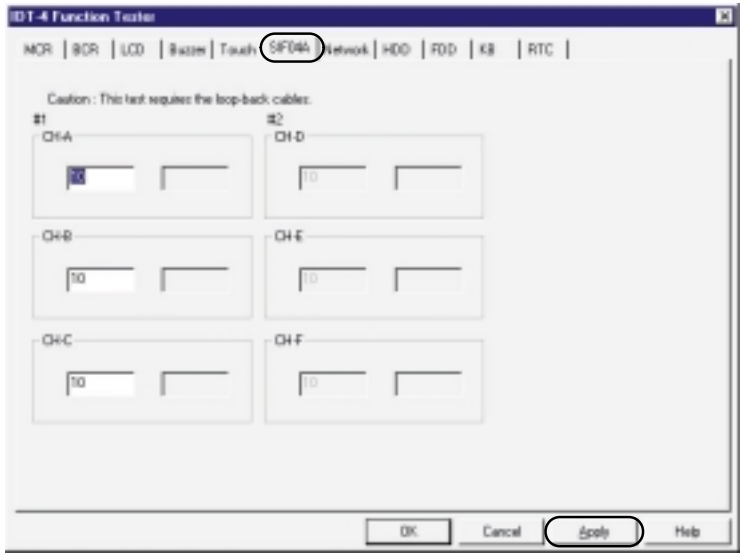
◆ ***NOTE*** ◆

If no SIF04A boards have been installed, checking will result in "NG". Checking will not be possible if no loopback connectors are installed even though the SIF04A board has been installed.

(1) Touch the "SIF04A" tab on the "IDT-4 Function Tester" screen, and then touch [Apply].

◆ ***NOTE*** ◆

Do not change values.



FT100365.EPS

➔ Check results ("OK" or "NG") appears.

When re-checking the SIF04A board, touch another menu tab and then touch the "SIF04A" tab.

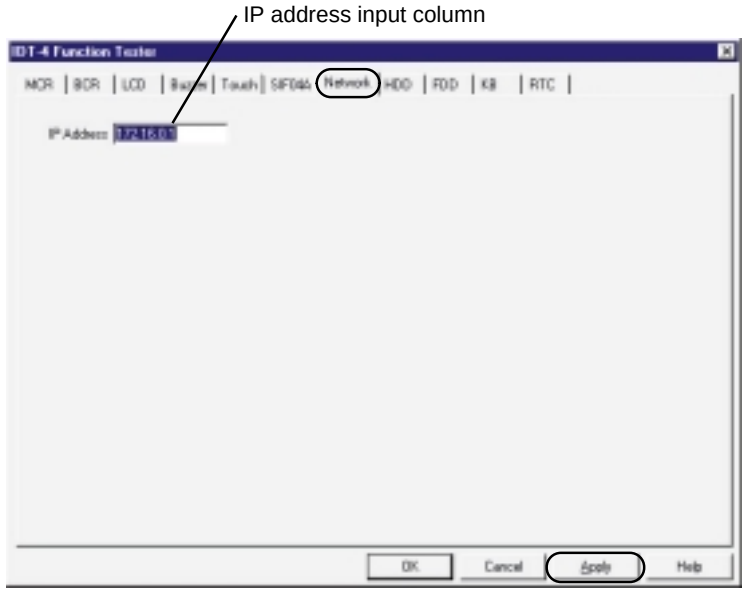
7. Network

Described below is how to check to see that networked devices can communicate with the IDT-IV.

◆ ***NOTE*** ◆

Communication with the IDT-IV is not possible if the network cable was connected after the IDT-IV has been started.
Reboot the IDT-IV if the network cable was connected.

(1) Touch the "Network" tab on the "IDT-4 Function Tester" screen and enter in the IP address input column the IP address of the machine you want to check communication with the IDT-IV.



FT100366.EPS

(2) Touch [Apply].

➔ The "FT" dialog appears.

● When connected normally

"Ping Success" appears in the "FT" dialog.

FT100367.EPS

● When not connected normally or an incorrect IP address entered

"Ping Failure" appears in the "FT" dialog.

FT100368.EPS

(3) Touch [OK].

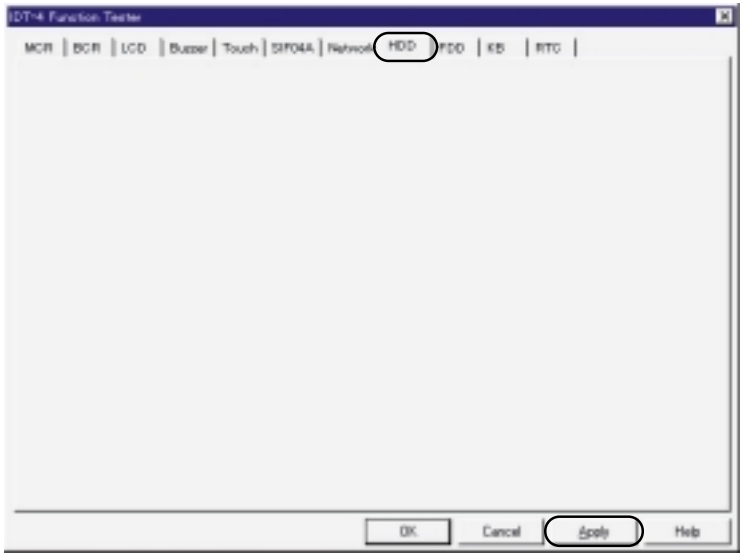
➔ You are returned to the "IDT-4 Function Tester" screen.

When re-checking communications with the IDT-IV, touch another menu tab and then touch the "Network" tab.

8. HDD

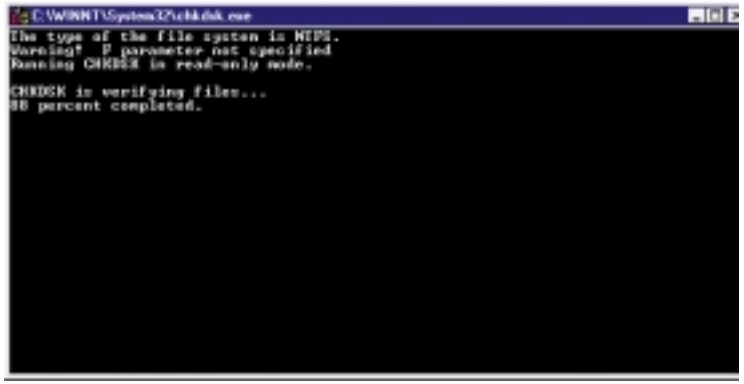
Described below is how to check the HDD.

(1) Touch the "HDD" tab on the "IDT-4 Function Tester" screen, and then touch [Apply].



FT100369.EPS

➔ The check screen appears.


The type of the file system is NTFS.
Warning! /P parameter not specified
Running CHKDSK in read-only mode.
CHKDSK is verifying files...
88 percent completed.

FT100370.EPS

➔ After checking, you are returned to the “IDT-4 Function Tester” screen.

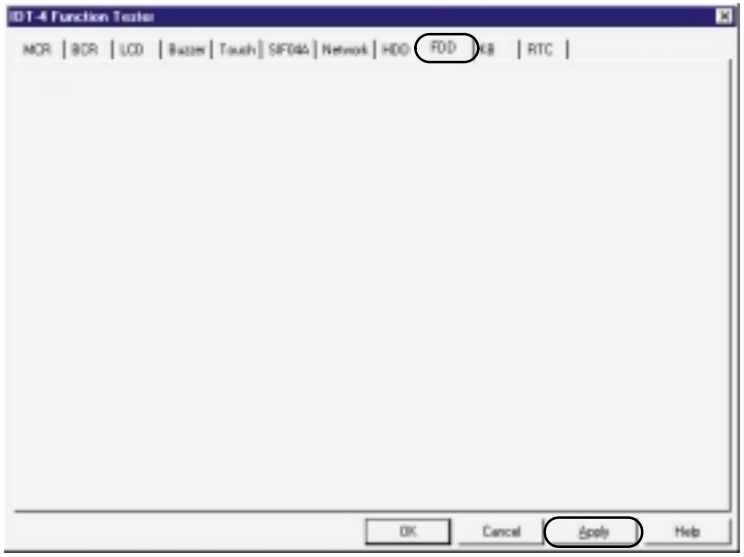
When re-checking the HDD, touch another menu tab and then touch the “HDD” tab.

9. FDD

Described below is how to check the FDD.

(1) Insert the FD into the FDD.

(2) Touch the “FDD” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].



FT100371.EPS

➔ FDD checking will start.
After the FDD has been checked, its results appear on the left top of the screen.

(3) Remove the FD from the FDD.

When re-checking the FDD, touch another menu tab and then touch the “FDD” tab.

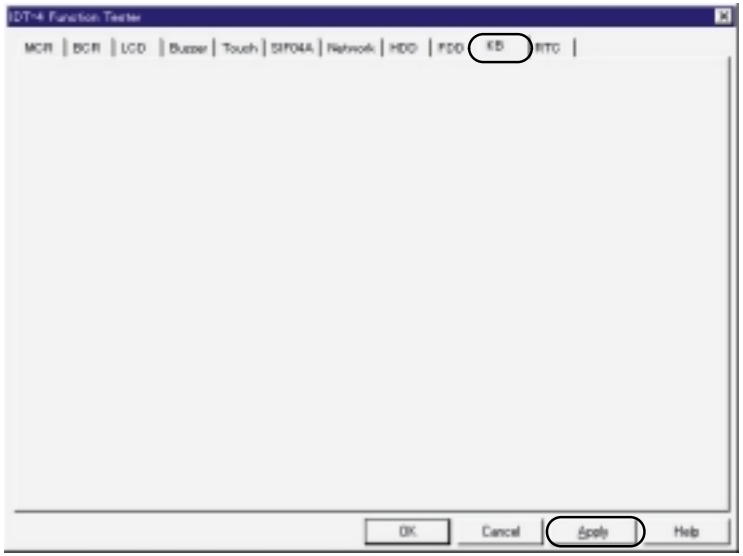
10. KB (keyboard)

Described below is how to check the ten-key on the keyboard.

◆ NOTE ◆

Make sure to connect the full keyboard.

(1) Touch the “KB” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].



FT100372.EPS

➔ The “Keyboard Test” dialog appears.

(2) Touch the ten-key on the keyboard.

➔ Keys that correspond to the touched keys will be selected on the “Keyboard Test” dialog.

FT100373.EPS

(3) Touch <Enter> key.

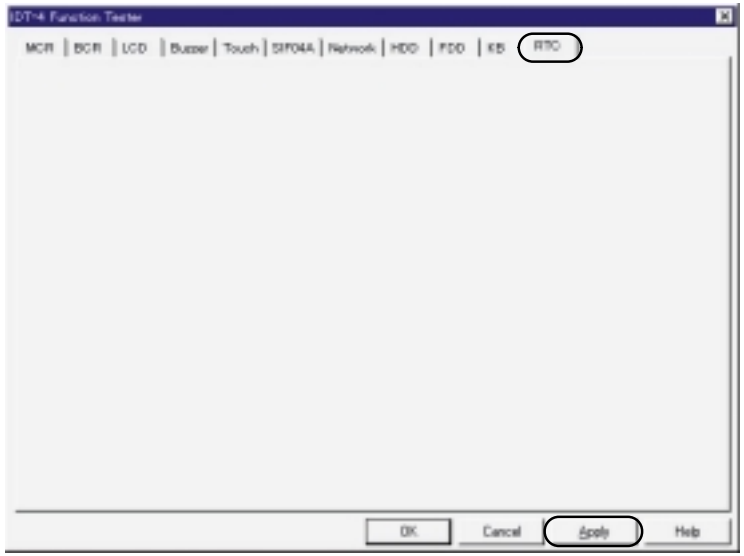
➔ You are returned to the “IDT-4 Function Tester” screen.

When re-checking the keyboard, touch another menu tab and then touch the “KB” tab.

11. RTC (date and time)

Described below is how to check the date and time.

(1) Touch the “RTC” tab on the “IDT-4 Function Tester” screen, and then touch [Apply].

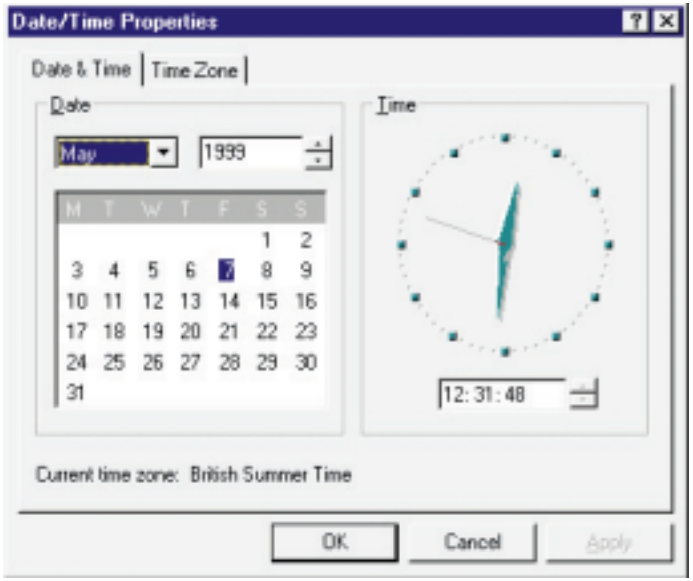


FT100374.EPS

➔ The “Date/Time Properties” screen appears.

(2) Check the date, time and time zone.

☞ 3.3.6 Setting the system,“■ Setting the date and time”



FT100375.EPS

(3) Touch [OK].

➔ You are returned to the “IDT-4 Function Tester” screen.

When re-checking the date and time, touch another menu tab and then touch the “RTC” tab.

APPENDIX 3 DATA CONVERSION PROCEDURES

Follow the procedures described herein so that institutions using the ID-T718 (IDT-III, CSL-III) can use IDT718 menu data in the IDT-IV. Data should be converted in the following order.

- Saving data to the IC card
- Copying data to the FD
- Converting data

■ Saving data to the IC card

Save ID-T718 (IDT-III, CSL-III) menu data to the IC card.

☞ FCR IDT-III Service Manual, Chapter C, 3.6 IC Card Backup"

■ Copying data to the FD

Copy IC card data to the FD.

Have the following ready for use when copying data to the FD.

- PC98 or DOS/V personal computer connected to "Ramzou"
- Formatted 3.5" 720K FD

(1) Turn the power to the monitor, "Ramzou" and personal computer ON.

(2) Insert the IC card into "Ramzou."

(3) Insert the FD into the FDD.

(4) Copy IC card data to the FD.

"mdata" and "udata" must be copied.

Example

C drive : Drive of the FDD

H drive : Drive of "Ramzou" data area

1. Enter "h:" and press the <Enter> key.
   → The current directory will be changed to the H drive.
2. Enter "xcopy Δh:data\mdata Δc:data\mdata Δ/s" ("Δ" is a space) and touch the <Enter> key.
   → "mdata" will be copied to the FD.
3. Enter "xcopy Δh:data\udata Δc:data\udata Δ/s" ("Δ" is a space) and touch the <Enter> key.
   → "udata" will be copied to the FD.

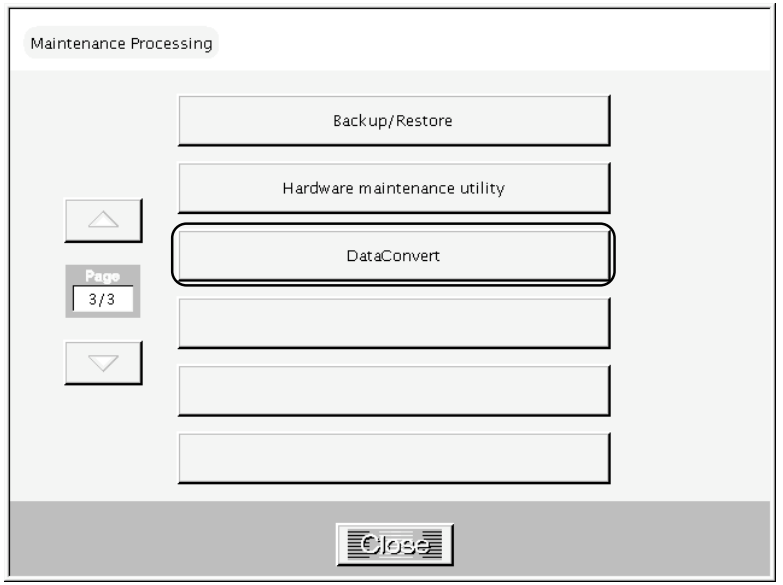
(5) Remove the IC card from "Ramzou."

(6) Remove from the FDD the FD (hereinafter called the "DataFD") to which the menu data has been copied.

■ Converting data

Convert data copied in the DataFD to the IDT-IV.

(1) Touch "DataConvert" on the "Maintenance Processing" menu screen.

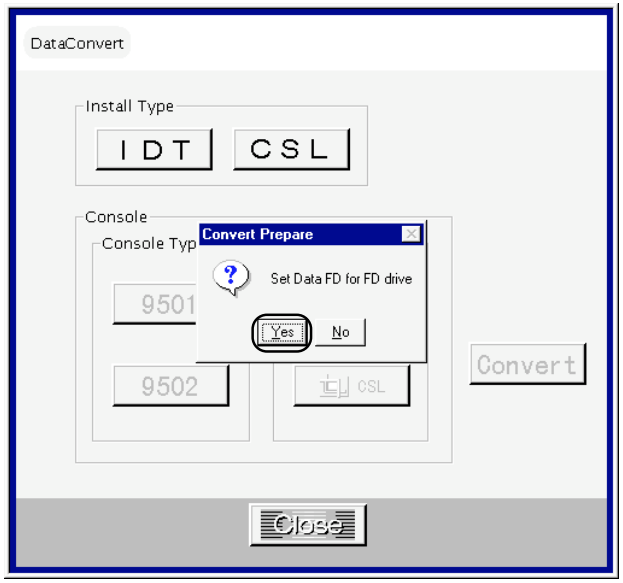


FT100700.EPS

→ The "Convert Prepare" screen will appear.

(2) Insert the DataFD into the FDD and touch [Yes].

If [No] is touched, the display will return to the "Maintenance Processing" menu screen.



FT100701.EPS

➔ DataFD data will be copied to the IDT-IV.

After copying data, the "Data Conversion" screen will be appear.

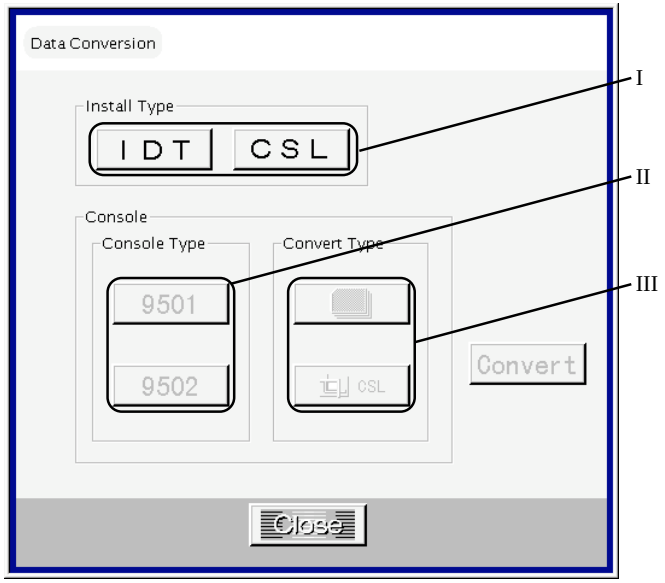
◆ Note ◆

The display will return to the "Convert Prepare" screen if even one of the following files does not included in the DataFD.

- *Data\Mdata\Idt_mng.dat*
- *Data\Udata\Mpmidx.prm*
- *Data\Udata\Mpmdef.prm*
- *Data\Udata\S_deftbl.dat*
- *Data\Udata\Mpmidxs.prm*
- *Data\Udata\Mpmsel.prm*
- *Data\Udata\Dspgtb.prm*
- *Data\Udata\K_menu.prm*
- *Data\Udata\K_bui.prm*

(3) Make settings as follows.

If [Close] is touched, data conversion will be suspended, returning the display to the "Maintenance Processing" menu screen.



FT100702.EPS

I. Select the "Install Type."

◆ Note ◆

When converting IDT-III data: Follow step (4) thereafter.
When converting CSL-III data: Follow step II. thereafter.

II. Select the "Console Type."

III. Touch the "Convert Type."

: Converts all menus.

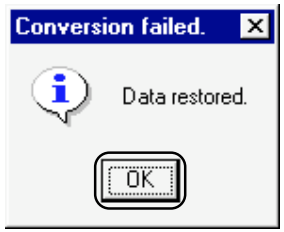
: Converts only the IP reading size and the IP reading position.

(4) Touch [Convert].

➔ Data conversion will start.
It will take 5 to 15 minutes to fully convert IDT-III data or all CSL-III menus.

● When conversion terminated abnormally

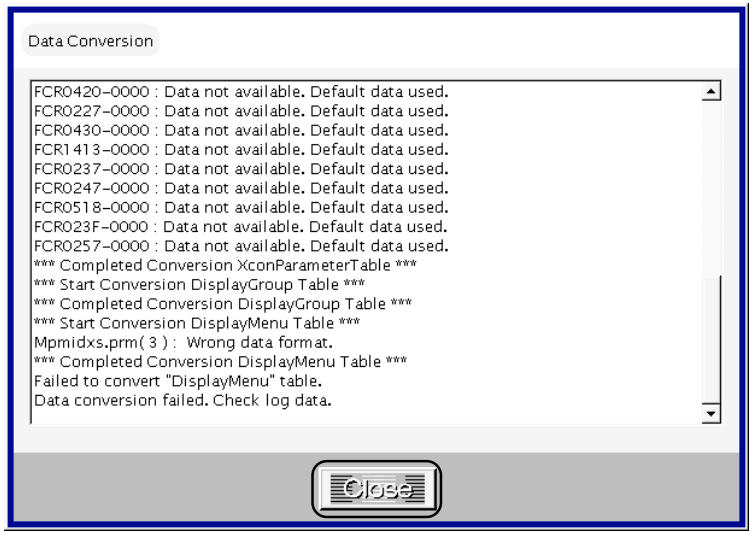
1. The “Conversion failed.” screen will appear. Touch [OK].



FT100703.EPS

➔ The “Data Conversion” result list screen will appear.

2. Touch [Close].

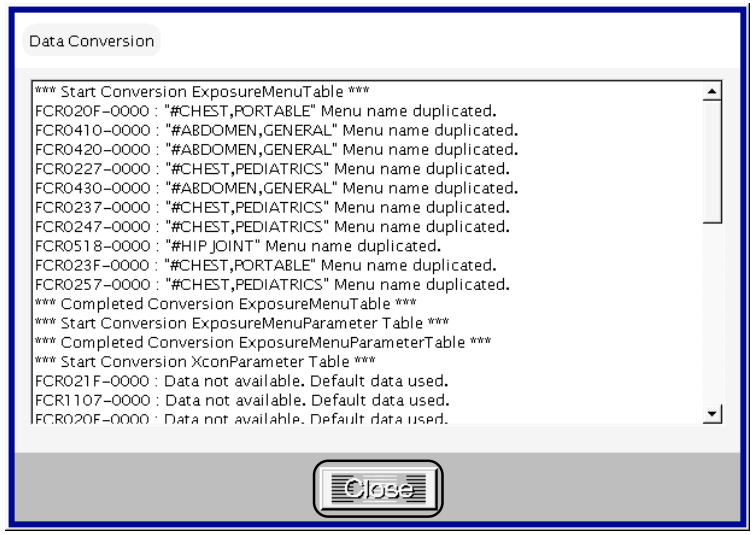

Data Conversion
FCR0420-0000 : Data not available. Default data used.
FCR0227-0000 : Data not available. Default data used.
FCR0430-0000 : Data not available. Default data used.
FCR1413-0000 : Data not available. Default data used.
FCR0237-0000 : Data not available. Default data used.
FCR0247-0000 : Data not available. Default data used.
FCR0518-0000 : Data not available. Default data used.
FCR023F-0000 : Data not available. Default data used.
FCR0257-0000 : Data not available. Default data used.
*** Completed Conversion XconParameterTable ***
*** Start Conversion DisplayGroup Table ***
*** Completed Conversion DisplayGroup Table ***
*** Start Conversion DisplayMenu Table ***
Mpmidxs.prm(3) : Wrong data format.
*** Completed Conversion DisplayMenu Table ***
Failed to convert "DisplayMenu" table.
Data conversion failed. Check log data.
Close

FT100704.EPS

➔ The display will return to the “Maintenance Processing” menu screen.

● When conversion completed normally

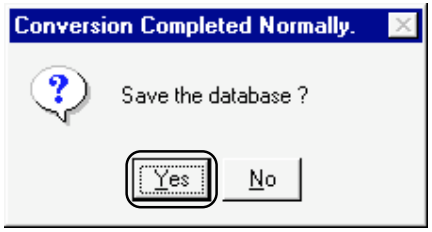
1. Touch [Close] on the “Data Conversion” result list screen.


Data Conversion
*** Start Conversion ExposureMenuTable ***
FCR020F-0000 : "#CHEST,PORTABLE" Menu name duplicated.
FCR0410-0000 : "#ABDOMEN,GENERAL" Menu name duplicated.
FCR0420-0000 : "#ABDOMEN,GENERAL" Menu name duplicated.
FCR0227-0000 : "#CHEST,PEDIATRICS" Menu name duplicated.
FCR0430-0000 : "#ABDOMEN,GENERAL" Menu name duplicated.
FCR0237-0000 : "#CHEST,PEDIATRICS" Menu name duplicated.
FCR0247-0000 : "#CHEST,PEDIATRICS" Menu name duplicated.
FCR0518-0000 : "#HIP JOINT" Menu name duplicated.
FCR023F-0000 : "#CHEST,PORTABLE" Menu name duplicated.
FCR0257-0000 : "#CHEST,PEDIATRICS" Menu name duplicated.
*** Completed Conversion ExposureMenuTable ***
*** Start Conversion ExposureMenuParameter Table ***
*** Completed Conversion ExposureMenuParameterTable ***
*** Start Conversion XconParameter Table ***
FCR021F-0000 : Data not available. Default data used.
FCR1107-0000 : Data not available. Default data used.
FCR020F-0000 : Data not available. Default data used.
Close

FT100705.EPS

➔ The “Conversion Completed Normally.” screen will appear.

2. Touch [Yes].



FT100706.EPS

→ The menu thus converted will be activated and the display will return to the "Maintenance Processing" menu screen.

◆ *Note* ◆

Touching [No] on the "Conversion Completed Normally" screen will not activate the converted menu and the display will return to the "Maintenance Processing" menu screen.

(5) Remove the DataFD from the FDD.